WATER QUALITY MONITORING

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- Pedricktown Confined Disposal Facility Containment Loading and Water Quality Analysis, Prepared for U.S. Army Corps of Engineers by Versar, Inc. October 2000.
- Killcohook Confined Disposal Facility Water Quality Analysis, Prepared for U.S. Army Corps of Engineers by Versar, Inc. February 2001

PEDRICKTOWN CONFINED DISPOSAL FACILITY CONTAMINANT LOADING AND WATER QUALITY ANALYSIS -FINAL REPORT-

Contract No. DACW61-95-D-0011 Task Order No. 0057

Prepared for

U.S. Army Corps of Engineers Philadelphia District Philadelphia, PA 19107-3390

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October 2000



EXECUTIVE SUMMARY

This study was undertaken in October 1998 in order to assess the role of an upland Confined Disposal Facility (CDF) in sequestering dredged material and sedimentbound contaminants, and to estimate the potential for mobilization of dissolved and suspended contaminants through the discharge of the dewatering weir. The U.S. Army Corps of Engineers (USACE), Philadelphia District established a comprehensive monitoring program at the Pedricktown North CDF to demonstrate compliance with relevant and applicable water quality standards defined by regional environmental agencies. Contaminant inputs and discharges from a CDF were monitored during an October and November 1998 dredging project in the Marcus Hook navigational range of the Delaware River. Throughout the project, inlet slurry samples of the dredged material and water samples from the site's de-watering weir, weir discharge plume, and a river background site were analyzed for metals, pesticides, volatile and semi-volatile organic compounds. and high-resolution PCBs. Water samples were compared to appropriate DRBC water quality criteria and daily chemical load techniques were used to estimate whether the discharge altered ambient concentrations in the river. The results of the chemical analysis of the discharge indicated that the dredging project resulted in only minor exceedances of water quality criteria. Analyte concentrations in the discharge rarely exceeded acute criteria during the monitoring. Analytes that exceeded DRBC water quality criteria were primarily metals that are present in background samples at levels similar to those in the weir and discharge plume. In addition, of the weir samples that exceeded their acute criteria, dissolved aluminum in one sample and dissolved zinc in 2 samples, detected concentrations of these metals were less than 44 percent higher than the respective criteria. The results of the daily chemical load analysis indicated that daily impacts on ambient river metals concentrations were very small and often no change resulted from the discharge. Where changes in river concentrations did occur, daily concentrations below the weir varied (higher and lower) from ambient conditions, no water quality criteria were violated.

Estimations of contaminant inputs to the disposal site, in mg chemical/L slurry, relative to the discharge from the weir, in mg chemical/L water, indicated that the Pedricktown North CDF was over 95 percent efficient at trapping contaminants found in the Marcus Hook range sediments. Mass balance calculations (subtracting the total volume of each chemical in the outfall from the input volumes) suggested that approximately 7.0 kg of PCBs were pumped into the site and only 0.02 kg were released back into the river through the weir. The site was also highly efficient at sequestering metals, removing them from the channel through dredging and allowing them to settle out of the water before being discharged into the estuary. In total about 3.6 million kg of metals were introduced into the CDF and only 3,600 kg were reintroduced into the river through the discharge weir. Approximately 99 percent of the contaminants introduced to the site and 90 percent of those released from the weir were the metals, aluminum, iron, and manganese, which are among the most common naturally occurring elements.





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1. 0 INTRODUCTION

1.1 BACKGROUND

The U.S. Army Corps of Engineers (USACE) is responsible for maintaining safe navigation in the Delaware River. To evaluate potential environmental impacts of dredging the Philadelphia to the Sea channel, the USACE has conducted extensive studies. The majority of dredging is conducted using hydraulic dredging techniques. Environmental concerns over hydraulic dredging include the potential that contaminants trapped within river sediments will be released and mobilized to the water column (and hence to biota) at the cutter head and through the discharge water of Confined Disposal Facilities (CDFs). The Delaware River Philadelphia to the Sea project employs seven existing disposal sites for placement of dredged material. In a typical dredging operation hydraulically dredged material is pumped into an upland disposal site (a CDF) with a 25 percent sediment to 75 percent water ratio to facilitate efficient pumping of sediment and rock through the dredge pipeline. Upland disposal sites are designed to maximize the water's residence time in the CDF to allow suspended sediments associated with the dredged slurry time to settle out. Many chemical contaminants bind to solid particles rather than readily dissolve into water. Therefore, sequestering solids in upland CDFs also sequesters chemicals from the estuary.

Sediment contaminant concentrations and the potential for releases to the water column at the cutter head were addressed in an Environmental Impact Statement (EIS) (USACE 1997), in a special study of polychlorinated biphenyl (PCB) concentrations in navigational sediment (Burton 1997), and in an independent review of the USACE sediment contaminant data conducted by Delaware Department of Natural Resources and Environmental Control (DNREC 1999). In 1997, Versar examined the extent of PCB contamination in the Philadelphia to the Sea navigation channel by conducting extensive sampling of PCBs using high-resolution laboratory techniques. In general, the results of the Versar study showed lower PCB concentrations in the navigational channel relative to the shoals. In DNREC (1999) the concentration of contaminants surrounding dredge cutter heads was estimated as was metals contamination in river bends. DNREC described higher contaminant concentrations in river bends, and determined that if total suspended sediments could be maintained below 250 mg/L, water quality surrounding cutter heads would meet applicable criteria.

The present study was conducted by the USACE to address concerns related to the potential mobilization of contaminants through the discharge water of a typical CDF. To provide an estimate of what metals and organic contaminants may be mobilized during a typical dredging project, contaminant monitoring for a dredge maintenance project in the Marcus Hook range was conducted between October 6 and November 8, 1998. The Marcus Hook range of the Delaware provides a worst case scenario from a sediment perspective as this industrialized region of the Delaware River has generally higher concentrations of metals, PCBs, and organics relative to other upriver and down-river navigational ranges. For the Marcus Hook maintenance dredging project approximately 800,000 cubic yards of material was placed in a 567 acre upland disposal site known as Pedricktown North. This site is located on the eastern shore of the Delaware River in



Salem County, New Jersey, approximately 2 miles north of the town of Penns Grove (Figure 1-1).

1.2 OBJECTIVES AND STUDY APPROACH

The objectives of this study were to:

- evaluate the contaminant concentration in the weir discharge relative to regulatory criteria,
- estimate what percentage of contaminants in the dredged slurry are retained by the CDF,
- characterize and quantify metals, organics, and PCBs that are released back into the river by the CDF discharge, and
- · calculate the daily chemical load in the CDF discharge.

This study was designed to determine the role a CDF may play in sequestering Delaware River contaminants. Historical studies conducted during material placement in upland disposal sites were used primarily to determine if water quality criteria were met during dredging operations. By simultaneously sampling dredged material contamination at the influent pipe and the weir discharge, we estimated how many kilograms of contaminants were retained by the CDF relative to how many kilograms that were released through the weir. The difference between the two and the percentage of contaminants retained by the CDF described the ability of the CDF to sequester bulk sediment contaminants.

The daily chemical load analysis is an analytical approach that allowed for consideration of daily impacts on river water quality resulting from the CDF discharge. The metals concentrations and volume of water being discharged were multiplied to assess the total metals loadings to the river. This was added to the total ambient river loading, and the relative change on the river water contaminant concentrations was estimated and compared to DRBC water quality criteria.

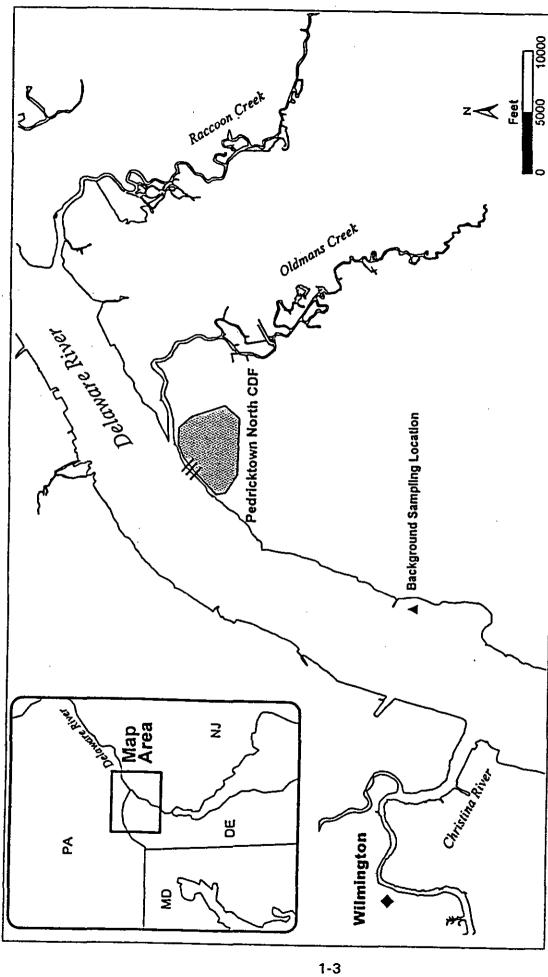


Figure 1-1. Map of Pedricktown confined disposal facility location



2. 0 STUDY DESIGN AND METHODS

The maintenance dredging operation that took place at Marcus Hook in fall 1998 was designed to last for approximately four weeks. In order to assess the range of chemical constituents that would be introduced to the CDF, the dredged material influent was sampled periodically during the dredging operation. Four influent samples were collected at the end of each week of dredging. Communications with the dredge operator confirmed the times of operation, as well as the progress of the project, such that all allocated influent samples could be collected during the period of active dredging.

Given the size and construction of the Pedricktown CDF, the residence time was roughly three weeks. Residence time is the length of time from when dredged material is placed in the site until the water portion of the slurry is discharged from the weir, Residence time is determined by several factors, including the size of the site; soil qualities, including type of substrate and dryness; and engineering controls, such as the division of the CDF into cells to direct water throughout the site. In addition, the presence of vegetation throughout a site can alter the residence time by slowing water and suspended material flow and through uptake of water. A CDF with a large residence time, such as Pedricktown, loses water to evaporation, uptake by vegetation, and through filtration into the ground. Although the dredge operation began in early October, the weir did not discharge water until October 27. Similarly, dredging was completed November 7, but the weir discharged through November 24. In total, 2,41*109 (2.4 billion) liters of material were placed in the site. The influent slurry is roughly 75 percent water, which is equal to 1.81*109 (1.8 billion) liters of water. A total of 3.89*108 (389 million) liters of water were discharged through the weir, which is 21.5 percent of the total influent volume of water. Weir samples were collected throughout the period of water discharge from the CDF in order to monitor the water quality and estimate contaminant loadings released. A flow meter installed in one of the three discharge pipes enabled the entire outflow from the Pedricktown North CDF to be measured throughout the drainage period.

To evaluate contaminant concentrations in the vicinity of the weir, discharge plume samples were collected 140 yards downstream and toward the channel from the discharge pipes at a mid-water depth. A background location of similar physical characteristics was sampled in order to estimate ambient river conditions throughout the study. This background site was located along the eastern shore of the river, the same side as Pedricktown, approximately 2 miles south of the CDF, off the Penns Grove public beach (Figure 1-1). This site was selected because of its close proximity without influence of site-related activities, as well as similar physical conditions, and its relative distance from any known contaminant source. Samples were collected at a similar distance from shore and depth as the discharge plume samples in order to approximate conditions of the Pedricktown discharge.

2.1 FIELD METHODS

2.1.1 Water Quality Samples

All samples were analyzed for total suspended solids (TSS) and a full suite of chemical analytes, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, inorganic elements, and high-resolution congener specific PCBs. All samples other than influent samples were analyzed for both total and dissolved inorganics. Samples collected from the Pedricktown North weir, discharge plume, and background were compared to the DRBC water quality criteria.

2.1.1.1 Weir

The weir discharge was sampled using an ISCO® automatic sampler to obtain composite samples throughout the discharge period as well as daily TSS samples. The sampler consists of a peristaltic pump, controlled by a computer, which allows for collecting fixed amounts of water into sample containers over a period of time. The sample was collected through Teflon tubing that was suspended into the weir. The sample routine for this project was designed to collect water at 6-hour intervals. One liter sample jars for metals and PCBs were filled over the course of four days, and one 250-ml TSS container was filled each day. Two weir samples were not collected in this manner, the VOC and the SVOC, since the samples must be sealed immediately following collection. A composite weir sample was collected when the field crew arrived at the site, by manually starting the sampler pump and filling the sample container once per hour over a 6-hour period. After all other fieldwork was completed, the field crew would return to the weir, remove the VOC and SVOC sample, and reset the sampler for the original sampling routine.

2.1.1.2 Discharge Plume

Discharge plume samples were collected at slack tide, either high or low, depending on the tide cycle. Since the discharge pipe was between the high and low tide line, different methods of sampling had to be employed to sample the discharge plume at any tidal stage. A fixed-point station was erected at the designated distance, 140 yards from the discharge pipe, to be used for collecting high-slack samples. A pulley was affixed to the station, with a rope connecting back to a point above the high tide line on shore. A peristaltic pump, equivalent to the one used at the weir, was used to collect a mid-water sample (roughly 2-feet below the surface) by tying the suction head of the sampler to the line and pulling it out to the fixed station. A volume of water greater than twice the volume of the 100+ yards of Teflon tubing required to reach the fixed station was pumped through the sampler prior to collecting the samples.

When the sample was collected at low slack tide, the fixed station that represented the appropriate distance from the discharge pipe was much less than the required 140 yards from the effluent point of entry. Under these conditions, the discharge entered the river at water's edge. Therefore, the discharge plume sample was collected 140 yards from the water's edge using the same sampler designed for sampling at the fixed high-slack station. At low slack tide, a member of the field crew would wade out and hold the



sampler suction head at a mid-water depth. Again, a volume of water greater than twice the volume of the tubing was pumped through the sampler before the sample was collected.

2.1.1.3 Background

Background samples were collected following the methods established for low slack tide collection of the discharge plume area sample. The background sample location, off the Penns Grove public beach, south of the pier, was determined to be similar to the discharge plume site in physical regime and free from direct chemical influence from any known source of pollutants. Background samples were collected as close to slack tide as possible, given that the discharge plume sampling occurred at slack tide.

2.1.1.4 Influent

Given the high-pressure flow out of the influent pipe, a grab sample was taken using a swing-arm sampler with a Teflon beaker fixed onto one end. The beaker was lowered into the influent flow, at the point where the dredged material was falling into the accumulated dredged material in the CDF. This is an area of rapid mixing, which allowed for us to sample the influent as close to the point of origination as possible. The material was poured into sample containers and sealed immediately.

2.1.2 Flow Measurements

Inflow from the dredge was estimated using dredging logs. The total number of minutes spent dredging each day was multiplied by the pumping rate of the dredge (24,000,000 gallons per day). This rate is equivalent to 16,667 gallons per minute, which was used to determine the daily influent flow.

A transducer-type flow meter was fixed inside the most intact and accessible of the three discharge pipes. The flow meter was connected to a data-logging device that stored the discharge flow rate in 15-minute intervals. The data was downloaded onto a computer and reviewed twice each week during the sampling period to be certain the flow meter was operating correctly.

2.2 LABORATORY METHODS

Sample containers were promptly shipped following collection to the contract laboratories performing chemical analysis. The inorganic analyses, including total and dissolved inorganics as well as total cyanide, were performed by Envirosystems, Inc., Columbia, Maryland. All other analyses, except high-resolution PCBs, were performed by Kemron, Inc., Marietta, Ohio. Kemron used USEPA method 8260 for VOCs, 8270 for SVOCs, 8081 for pesticides, and 160.2 for TSS (Table 2-1).



Table 2-1. Analyte list, methods, and including PCBs) used for t		
Analyte	Method	Detection Limit (µg/L)
Volatile Organics		
Chloromethane	8260	10
Chromomethane	8260	10
Vinyl Chloride	8260	10
Chloroethane	8260	10
Methylene Chloride	8260	5
Acetone	8260	10
Carbon disulfide	8260	5
1,1-Dichloroethene	8260	5
1,1-Dichloroethane	8260	5
1,2-Dichloroethene (Total)	8260	5
Chloroform	8260	5
1,2-Dichloroethane	8260	5
2-Butanone	8260	10
1,1,1-Trichloroethane	8260	5
Carbon Tetrachloride	8260	5
Bromodichloromethane	8260	5
1,2-Dichloropropane	8260	5
cis-1,3-Dichlorpropene	8260	5
Trichloroethene	8260	5
Dibromochlormethane	8260	5
1,1,2-Trichloroethane	8260	5
Benzene	8260	5
Trans-1,3-Dichloropropene	8260	5
Bromoform	8260	5
4-Methyl-2-pentanone	8260	10
2-Hexanone	8260	10
Tetrachloroethene	8260	5
1,1,2,2-Tetrachloroethane	8260	5
Toluene	8260	5
Chlorobenzene	8260	5
Ethyl benzene	8260	5
Styrene	8260	5
Xylenes, total	8260	5
Semivolatile Organics		
Phenol	8270	10
Bis(2-chloroethyl) ether	8270	10
2-Chlorophenol	8270	10
1,3-Dichlorobenzene	8270	10
1,4-Dichlorobenzene	8270	10



Table 2-1. Continued		
Analyte	Method	Detection Limit (µg/L)
1,2-Dichlorobenzene	8270	10
2-Methylphenol	8270	10
Bis(2-Chloroisopropyl)ether	8270	10
4-Methylphenol	8270	10
N-Nitroso-di-n-propylamine	8270	10
Hexachloroethane	8270	10
Nitrobenzene	8270	10
Isophorone	8270	10
2-Nitrophenol	8270	10
2,4-Dimethylphenol	8270	10
Bis(2-Chloroethoxy)methane	8270	10
2,4-Dichlorophenol	8270	10
1,2,2-Trichlorobenzene	8270	10
Napthalene	8270	10
4-Chloroaniline	8270	10
Hexachlorobutadiene	8270	10
4-Chloro-3-methylphenol	8270	10
2-Methylnaphthlene	8270	10
Hexachlorocyclopentadiene	8270	10
2,4,6-Trichlorophenol	8270	10
2,4,5-Trichlorophenol	8270	50
2-Chloronaphthalene	8270	10
2-Nitroaniline	8270	50
Dimethylphthalate	8270	10
Acenaphthylene	8270	10
2,6-Dinitrotoluene	8270	10
3-Nitroaniline	8270	50
Acenaphthene	8270	10
2,4-Dinitrophenol	8270	50
4-Nitrophenol	8270	50
Dibenzofuran	8270	10
2,4-Dinitrotoluene	8270	10
Diethylphthalate	8270	10
4-Chlorophenyl-phenyl ether	8270	10
Fluorene	8270	10
4-Nitroaniline	8270	50
4,6-Dinitro-2-methylphenol	8270	50
N-nitrosodiphenylamine	8270	10
4-Bromophenyl-phenylether	8270	10
Hexachlorobenzene	8270	10
Pentachlorophenol	8270	50
Phenanthrene	8270	10



Analyte	Method	Detection Limit (µg/L)
Anthracene	8270	10
Carbazole	8270	10
Di-N-butylphthalate	8270	10
Fluoranthene	8270	10
Pyrene	8270	10
Butylbenzylphthalate	8270	10
3,3'-Dichlorobenzidine	8270	20
Benzo(a)anthracene	8270	10
Chrysene	8270	10
bis(2-ethylhexyl)phthalate	8270	10
Di-N-octylphthalate	8270	10
Benzo(b)fluoranthene	8270	10
Benzo(k)fluoranthene	8270	10
Benzo(a)pyrene	8270	10
Indeno(1,2,3-cd)pyrene	8270	10
Dibenzo(a,h)Anthracene	8270	10
Benzo(g,h,l)perylene	8270	10
Pesticides		
Alpha-BHC	8081	0.055
beta-BHC	8081	0.055
Delta-BHC	8081	0.055
Gamma-BHC (Lindane)	8081	0.055
Heptachlor	8081	0.055
Aldrin	8081	0.055
Heptachlor epoxide	8081	0.055
Endosulfan I	8081	0.055
Dieldrin	8081	0.11
4,4'-DDE	8081	0.11
Endrin	8081	0.11
Endosulfan II	8081	0.11
4,4'-DDD	8081	0.11
Endosulfan sulfate	8081	0.11
4,4'-DDT	8081	0.11
Methoxychlor	8081	0.55
Endrin ketone	8081	0.11
Endrin aldehyde	8081	0.11
Alpha Chlordane	8081	0.055
Gamma Chlordane	8081	0.055
Toxaphene	8081	1.1



Analyte	Method	Detection Limit (mg/L)
norganics		mg/L
Aluminum	200.7	0.007
Antimony	200.7	0.019
Arsenic	206.2	0.01
Barium	200.7	0.001
Beryllium	200.7	0.001
Cadmium	200.7	0.002
Calcium	200.7	0.001
Chromium	200.7	0.002
Cobait	200.7	0.006
Copper	200.7	0.002
Cyanide	9010	0.01
lron	200.7	0.005
Lead	239.2	0.001
Magnesium	200.7	0.001
Manganese	200.7	0.001
Mercury	245.1	0.0002
Nickel	200.7	0.002
Potassium	200.7	0.051
Selenium	270.2	0.001
Silver	200.7	0.002
Sodium	200.7	0.1
Thallium	279.2	0.001
Vanadium	200.7	0.003
Zinc	200.7	0.002
Total Suspended Solids	160.2	5

Dredged material is estimated to be composed of approximately 25 percent sediment and 75 percent water. In order to obtain chemical data for these samples, it was necessary for the laboratories to partition the influent samples into their liquid and solid portions for analysis. This allowed for the analysis of contaminants in the water fraction of the sample separately from the sediment-bound contaminants. After performing laboratory analysis, the concentrations of liquid- and solid-phase contaminants were summed based on the volume of the original sample that was liquid or solid, and a total concentration for the slurry sample was obtained. Sample containers were promptly shipped following collection to the contract laboratories performing chemical analysis. The inorganic analyses, including total and dissolved inorganics as well as total cyanide, were performed by Envirosystems, Inc., Columbia, Maryland. Influent samples, which were in slurry form, were handled differently from the other samples due to the high volume of suspended material.



High-resolution PCB analysis was conducted by Midwest Research Institute, Kansas City, Missouri. The analytical method (draft USEPA 1668) allowed for the identification of 77 mono-ortho and di-ortho PCB congeners as well as the 4 non-ortho coplanar PCBs (Table 2-2).

A high resolution gas chromatography (HRGC)/ high resolution mass spectrometry (HRMS) method was used for the non-ortho coplanar PCB congeners in all samples, and for the mono-and di-ortho congeners in inlet and weir samples. The HRGC/HRMS method allows for a detection limit of 1.25 ng/L for the mono- and di-ortho congeners and 25 pg/L for the non-ortho congeners in aqueous samples. Solid samples have detection limits of 0.125 ng/g for mono- and di-ortho congeners and 12.5 pg/g for non-ortho congeners. The inlet samples, which have aqueous and solid portions, were extracted separately and recombined based on the percent solids in each sample. For this reason, the detection limits for inlet samples (solid sample limits extrapolated to the slurry sample) vary based on the percent solids of each sample. A HRGC/low resolution mass spectrometry (LRMS) method that has a detection limit of 25 ng/L for aqueous samples was used for the mono-and di-ortho congeners for the discharge plume and background samples.

2.3 DATA ANALYSIS

2.3.1 Water Quality Criteria Comparison

Weir, discharge plume, and background were compared to relevant DRBC water quality criteria (DRBC 1996). Several of the criteria for inorganics are hardness-dependent values. For these compounds, the chronic criteria were calculated using the DRBC recommended guideline of a hardness of 74 mg/L. Acute criteria were calculated using hardness calculated from the discharge plume water quality data. This method of comparison is conservative in the use of chronic criteria because of the positive relationship between hardness and the criteria. The calculated hardness near Pedricktown North was an order of magnitude greater than 74 (the regulatory guideline), which would result in higher hardness-dependant screening levels. In addition, the use of acute criteria may provide a more realistic assessment of potential adverse effects resulting from short-term exposure to contaminants released from the Pedricktown North CDF, particularly under circumstances where individual chemical parameters only exceed screening criteria in one sample over the course of a dredging period.

The water quality criteria for inorganic elements defined by the DRBC are intended for comparison to dissolved metals concentrations. The justification for such a comparison is that only dissolved inorganics are biologically available, whereas particulate inorganics are not likely to undergo incorporation into organisms. Therefore, the comparison of inorganic concentrations detected in the weir, discharge plume, and background data is made using dissolved metals concentrations. Total metals data is also available, and are compared to the most relevant water quality criteria, which are DRBC criteria designed for dissolved metals. By comparing total metals concentrations to criteria designed for dissolved metals, the data are likely to indicate exceedances of water quality criteria due solely to suspended particulate containing metals. These data do not necessarily indicate a true exceedance of water quality criteria and are shown for

1.25/25



Table 2-2. Analyte list, methods, and detection limits for high-resolution PCB congener specific analyses for the Pedricktown North CDF study **Analyte** Method **Detection Limit** High Resolution PCBs Non-Ortho Coplanar Congeners pg/L 77-Tetra 1668 25 81-Tetra 1668 25 126-Penta 1668 25 169-Hexa 1668 25 Mono- and Di-Ortho Congeners ng/L (HRMS/LRMS) 8-Di 1668 1.25/25 18-Tri 1668 1.25/25 28-Tri 1668 1.25/25 37-Tri 1668 1.25/25 42-Tetra 1668 1.25/25 44-Tetra 1668 1.25/25 47-Tetra 1668 1.25/25 49-Tetra 1668 1.25/25 52-Tetra 1668 1.25/25 60-Tetra 1668 1.25/25 64-Tetra 1668 1.25/25 66-Tetra 1668 1.25/25 70-Tetra 1668 1.25/25 74-Tetra 1668 1.25/25 80-Tetra 1668 1.25/25 82-Penta 1668 1.25/25 84-Penta 1668 1.25/25 86-Penta 1668 1.25/25 87-Penta 1668 1.25/25 91-Penta 1668 1.25/25 92-Penta 1668 1.25/25 95-Penta 1668 1.25/25 97-Penta 1668 1.25/25 99-Penta 1668 1.25/25 101-Penta 1668 1.25/25 105-Penta 1668 1.25/25 110-Penta 1668 1.25/25 114-Penta 1668 1.25/25 118-Penta 1668 1.25/25 119-Penta 1668 1.25/25 120-Penta 1668 1.25/25 123-Penta 1668 1.25/25 127-Penta 1668



Analyte	Method	Detection Limit
28-Hexa	1668	1.25/25
137-Hexa	1668	1.25/25
138-Hexa	1668	1.25/25
141-Hexa	1668	1.25/25
146-Hexa	1668	1.25/25
149-Hexa	1668	1.25/25
151-Hexa	1668	1.25/25
153-Hexa	1668	1.25/25
156-Hexa	1668	1.25/25
157-Hexa	1668	1.25/25
158-Hexa	1668	1.25/25
166-Hexa	1668	1.25/25
167-Hexa	1668	1.25/25
168-Hexa	1668	1.25/25
170-Hepta	1668	1.25/25
171-Hepta	1668	1.25/25
174-Hepta	1668	1.25/25
177-Hepta	1668	1.25/25
179-Hepta	1668	1.25/25
180-Hepta	1668	1.25/25
183-Hepta	1668	1.25/25
185-Hepta	1668	1.25/25
187-Hepta	1668	1.25/25
189-Hepta	1668	1.25/25
190-Hepta	1668	1.25/25
191-Hepta	1668	1.25/25
194-Octa	1668	1.25/25
195-Octa	1668	1.25/25
196-Octa	1668	1.25/25
198-Octa	1668	1.25/25
200-Octa	1668	1.25/25
201-Octa	1668	1.25/25
203-Octa	1668	1.25/25
205-Octa	1668	1.25/25
206-Nona	1668	1.25/25
207-Nona	1668	1.25/25
208-Nona	1668	1.25/25
209-Deca	1668	1.25/25



informational purposes. The DRBC water quality criteria are only appropriate for screening the dissolved inorganic concentrations.

2.3.2 Pedricktown North Confined Disposal Facility Contaminant Loadings

Total contaminant input was compared to the contaminant discharge at the weir to estimate the mass chemical loadings of the Pedricktown North CDF during the dredging operation. By combining the chemical analytical data with the total influent flow, as determined by dredging logs, we estimated the total amount of contaminants that was removed from the river channel and placed in the Pedricktown North CDF.

The total weir discharge was obtained by multiplying contaminant concentration data by the discharge flow, with non-detects assumed to be zero. The difference between the contaminants added to and released from the CDF was estimated to be the total contaminant loadings of the CDF. The ratio of discharge loading to the loading placed in the CDF presented the retention of the CDF. The retention of the CDF was used to determine what percentage of the contaminants is mobilized back into the river.

2.3.3 Daily Chemical Load Analysis

The daily chemical load analysis was conducted to determine if the CDF discharge had an impact (i.e., raised or lowered) the ambient water quality of the Delaware River. Rather than comparing instantaneous or composite chemical results to screening criteria, an evaluation of the changes in the daily chemical loading of the Delaware River provides a framework in which to evaluate the cumulative effect of dredging on water quality. Daily load analysis allows for the comparison of the CDF discharge to the ambient Delaware River water quality within the area that the disposal site is located, while accounting for the variable flow from the CDF. Only metal concentrations were used in this analysis as too few organics and PCBs were detected in the discharge to warrant further analysis. The daily load of metals in the weir discharge was determined using the procedures outlined in Section 2.3.2.

Ambient metals data were obtained from the USEPA (1999) and the DRBC Toxics Management Program (Fikslin 1999) and the background samples from this study. The DRBC data set was believed to be the most accurate estimate of ambient river concentrations, but only contained data for 4 analytes. The USEPA data set contains samples from this portion of the Delaware from the 1950s through 1998. A subset of these data was used to obtain the most relevant samples. The most recent samples collected between October and December were used because dredging is limited to late fall and winter months. The collection dates of the samples used for comparison were all autumn sampling events from 1985 and later, some analytes used data from 1990 and later. Mean concentrations of total and dissolved metals were used to represent ambient river concentrations. For those analytes that did not have suitable ambient river concentration estimates from the DRBC or USEPA estimates, background data collected at Penns Grove for this study were used. The mean concentration of each of the analytes was used to represent river concentrations. Assumed river concentrations were multiplied by a conservative estimate of river flow, 118.47 m³/sec, taken from DRBC (1998) Table 12, which is the DRBC Zone 5 low flow. Low flow conditions are used for autumn because this is a period of less rainfall and lower flow than the rest of the year.



3. 0 RESULTS

All background, weir, and discharge plume data were compared to ecologically based DRBC water quality criteria. It should be noted that, while hardness dependant chronic criteria were based on the DRBC recommended hardness of 74 mg/L, hardness dependant acute water quality criteria were determined using discharge plume samples. Hardness was calculated from discharge plume data following ASTM Method 2340B, determined by the following calculation:

 $Hardness_{mg/L} = (2.497 * Calcium_{mg/L}) + (4118 * Magnesium_{mg/L})$

The mean hardness of discharge plume samples was 377 mg/L. This result, while higher than might be anticipated, is indicative of autumn, low runoff conditions, during a particularly dry year. The hardness is influenced by salinity in this portion of the Delaware River, particularly during this time of year. For comparison, the USEPA data used for assessing cumulative river impacts (Section 3.3) were also evaluated for hardness. There were 129 samples for which there was hardness data between October and December of 1990 through 1998, and the mean hardness of these samples was 246.3 mg/L. This is consistent with the calculated mean discharge plume hardness used to evaluate acute water quality criteria.

3.1 WATER QUALITY ANALYSIS

3.1.1 Influent Samples

Influent contaminant concentrations are given for comparison purposes and are not compared to water quality criteria. They were used in determining loadings for the Pedricktown North CDF. These samples were analyzed as a slurry; both the water and sediment fractions of the samples were analyzed and the total concentration presented is the joint sum of the solid and aqueous fractions of the sample. They are not compared to water quality criteria because the contaminant concentrations represent both sediment and water concentrations and do not represent a discharge concentration to the waters of the Delaware River, which is the intended focus of water quality criteria.

Acetone appears as a detected analyte for three of the influent samples (Table 3-1), but this most likely is due to method error within the lab, since acetone is a common laboratory contaminant. The only other organic compounds detected in influent samples were DDT and its congeners (DDD and DDE; Table 3-1). The pesticides were irregularly present in samples and are likely to indicate localized areas of bulk sediment contamination. The influent samples possess typical inorganic element signatures for Delaware River sediments as determined in previous studies throughout the Delaware River (Burton and Bruce 1996 and 1998, Burton 1999). The concentrations of inorganics detected in inlet samples are less than or equal to those in prior sediment studies. Overall, contaminant concentrations were relatively consistent throughout the period of dredging.

The results of the other water quality analyses are presented below.



slurry samples						
PARAMETERS	UNITS	DETECTION	INLET	INLET	INLET	INLET
		LIMIT	10/15/98	10/26/98	11/2/98	11/5/98
Volatile Organic Compounds				·		
Acetone	µg/L	10	37.24	115.5	ND	51.2
Bromoform	µg/L	19	ND	ND	ND	ND
Dibromochloromethane	µg/L	5	ND _	ND	ND	ND
1,2-dichloroethane	µg/L	5	ND	ND	ND	ND
Pesticides						
4,4'DDE	μg/L	0.12	0.02856	ND	ND	ND
4,4'DDD	μg/L	0.12	0.2448	ND	8.319	ND
4,4'DDT	μg/L	0.12	0.02856	ND	ND	ND
Total Metals				_		
Aluminum	mg/L	0.007	663	625	577	567
Antimony	mg/L	0.019	ND	0.4	0.54	0.58
Arsenic	mg/L	0.01	ND	ND	0.013	ND
Barium	mg/L	0.001	3.54	1.82	1.72	6.18
Beryllium	mg/L	0.001	ND	0.043	0.037	0.029
Cadmium	mg/L	0.002	0.078	0.08	0.071	0.079
Calcium	mg/L	0.001	169	199	154	334
Chromium	mg/L	0.002	2.26	2.13	2.05	2
Cobalt	mg/L	0.006	0.778	0.801	0.713	0.844
Copper	mg/L	0.002	1.532	1.59	1.14	1.48
Cyanide	mg/L	0.01	ND	0.01	0.016	0.045
Iron	mg/L	0.005	127	1260	1140	1470
Lead	mg/L	0.001	2.79	3.35	2.66	2.24
Magnesium	mg/L	0.001	275	290	260	349
Manganese	mg/L	0.001	9.7	9.7	0.023	144
Mercury	mg/L	0.0002	0.0211	0.0237	0.0139	ND
Nickel	mg/L	0.002	1.77	1.71	0.009	1.73
Potassium	mg/L	0.051	8.52	85.2	76.5	111
Selenium	mg/L	0.001	0.0014	0.0018	0.0018	0.0033
Silver	mg/L	0.002	ND	0.058	0.052	0.063
Sodium	mg/L	0.1	83.3	56	131	352
Vanadium	mg/L	0.003	2.36	1.92	2.01	2.14
Zinc	mg/L	0.002	12.1	12.4	10.7	10.1



3.1.2 Water Quality Criteria

3.1.2.1 Weir Data

The Pedricktown North CDF discharge had generally good water quality, and had limited levels of metals that exceeded water quality criteria. There were two VOCs detected in weir samples, acetone and 1,2-Dichloroethane, that most likely result from lab error or possible cross-contamination in the lab or field. Acetone is a common laboratory contaminant, not present in concentrations significantly greater than the detection limit, and 1,2-Dichloroethane was reported at a level far below the method detection limit, therefore is unlikely to indicate true contamination on the discharge water (Table 3-2). In addition, 1,2,-Dichloroethane is very volatile in the environment, it rapidly evaporates from water and soil, and is unlikely to be present in such mobile and turbulent media as water flowing through a weir.

Two dissolved metals, aluminum and zinc, exceeded acute water quality criteria in one and two samples, respectively. Aluminum had a maximum detected concentration of 0.893 mg/L, which was slightly greater than the acute water quality criteria of 0.75 mg/L. Similarly, the concentration of zinc in the samples that exceeded the acute water quality criteria of 0.36 mg/L were 0.375 and 0.518 mg/L. A total of four inorganic elements were detected above chronic water quality criteria (Table 3-2). Dissolved aluminum and zinc exceeded chronic water quality criteria in all samples, dissolved cadmium exceeded chronic water quality criteria in two samples (0.004 and 0.005 mg/L compared to the chronic water quality criteria of 0.001 mg/L), and dissolved copper exceeded chronic water quality criteria in four samples (concentrations between 0.011 and 0.046 compared to a chronic water quality criteria of 0.01 mg/L).

Similar patterns exist in total metals concentrations, although comparisons to water quality criteria are shown for informational purposes only, as described in Section 2.3.1. Aluminum and zinc exceeded acute water quality criteria in 2 samples each. Comparing total metals concentrations to DRBC dissolved metals criteria, aluminum had concentrations of 0.885 and 0.91 mg/L compared to the acute water quality criteria of 0.75 mg/L and zinc had concentrations of 0.578 and 0.414 mg/L compared to 0.36 as the acute water quality criteria. Again, all aluminum and zinc concentrations exceeded chronic water quality criteria, and cadmium (0.004 to 0.005 mg/L) and copper (0.013 to 0.015 mg/L) exceeded their chronic water quality criteria (0.001 and 0.01 mg/L, respectively).

3.1.2.2 Discharge Plume Data

As with the background and weir samples, the discharge plume samples show limited levels of water quality criteria exceedance. Acetone was detected in three discharge plume samples at levels slightly higher than the detection limit. However, since acetone is a common laboratory contaminant, these results are believed to represent laboratory error. Dissolved aluminum, in one sample at a concentration of 1.68 mg/L, was the only dissolved inorganic to exceed acute water quality criteria (0.75 mg/L), although by less than a factor of two (Table 3-3). Four dissolved inorganics, aluminum, cadmium, copper, and zinc equaled or exceeded chronic water quality criteria in at least one discharge plume sample. Aluminum exceeded the chronic water quality criteria in five of

Table 3-2. Analytica	il results	Analytical results from Pedricktown criteria, shaded cells indicate sample		North CDF weir samples. exceeds acute water quality	CDF weir samples.	imples.	BOLD ty	pe indicat	es sampl	e exceed	BOLD type indicates sample exceeds chronic water quality criteria.	vater	quality
. i		1				,b					DRBC Water Quality Criteria	Quali	ty Criteria
PARAMETERS	UNITS	DETECTION	WEIR 10/29/98	WEIR 11/2/98	WEIR 11/5/98	WEIR 11/9/98	WEIR 11/12/98	WEIR WEIR 11/16/98 11/19/98	WEIR 11/19/98	WEIR 11/24/98	Freshwater Acute		Freshwater Chronic
Volatile Organic Compounds	spur												
Acetone	µg/L	10	ND	QN	QN	ND	ON	12	=	-			
Bromoform	μg/L	19	ND	QN	ND	N	ND	QN	Q.	QN			
Dibromochloromethane		5	ND	QN	QN	QN	ND	ND	9	Q			
1,2-dichloroethane	Н	5	ND	QN	QN	QN	ND	ND	QN	0.32			
Pesticides													-
4,4'DDE	µg/L	0.12	QN	QN	QN	QN	ND	ND	Q	QN	1.1		
4,4'DDD	hg/L	0.12	QN	QN	QN	QN	ND	ND	Q	QN	1.1	•	0.001
4,4'DDT	hg/L	0.12	QN	αN	QN	QN	ND	QN	S.	QN	1.1	<u></u>	0.001
Dissolved Metals							Į į						
Aluminum	mg/L	0.007	0.295	0.166	0.48		0.656	0.126	0.099	0.135	0.75	<u> </u>	0.087
Antimony	mg/L	0.019	N	QN	QN	QN	QN	0.025	ON	ND		_	
4 Arsenic	mg/L	0.01	9	9	QN	QN	ON	QN	ON	QN	0.36	\dashv	0.19
Barium	mg/L	0.001	0.024	0.045	0.096	0.133	0.101	0.084	0.082	0.075		_	
Beryllium	mg/t	0.001	QN.	QN	QN	ND	ND	Q.	S	QN		4	1
Cadmium	mg/L	0.002	0.005	QN	QN	ND	ND	0.004	Q.	ON	0.02	٥	0.001
Calcium	mg/L	0.001	140	147	117	114	115	117	113	134		4	١
Chromium	mg/L	0.002	QN	QN	QN	ND	0.005	QN	Q	Q	0.016	<u> </u>	0.011
Cobalt	mg/L	9000	S	QN	QN	ND	ND	<u>Q</u>	Ð	QN		_	4
Copper	mg/L	0.002	0.018	0.008	0.035	0.011	ND	0.003	0.046	0.007	90.0	_	0.01
Iron	mg/L	0.005	0.305	0.135	0.596	1.52	0.762	0.285	0.284	0.292		_	
Lead	mg/L	0.001	ND	QN	QN	QN	ON	QN.	2	SO.	0.048	4	0.016
Magnesium	mg/L	0.001	69.5	91.2	79.3	77.8	77.9	84.4	83.4	95.1		+	
Manganese	mg/L	0.001	3.96	4.91	7.78	8.37	6.59	6.91	8.67	12.2		<u> </u>	
Mercury	mg/L	0.0002	QN	QΝ	QN	9	QN N	2	2	QN	0.0024	3	0.000012
Nickel	mg/L	0.002	0.048	0.047	0.055	0.057	0.044	0.059	0.051	0.078	4.36	1	21.0
Potassium	mg/L	0.051	12.5	16.5	15.3	14	17.3	17.5	18	17.7		+	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Selenium	mg/L	0.001	QN	QN	ND	9	9	2	2) ا	0.003
Silver	mg/L	0.002	QN	QN	ND	QN	QN	9	Q.	QN .	0.04	+	
Sodium	mg/L	0.1	286	379	344	418	423	232	242	242		-	
Vanadium	mg/L	0.003	0.007	QΝ	QN	Q	QN	QN	2	ON C		-	900
Zinc	mg/L	0.002		0.07	0.251	0.194	0.263	0.248	0.203	0.333	0.30	4	0.00

Table 3-2. Continued PARAMETERS Total Metals	UNITS	DETECTION	WEIR 10/29/98	WEIR 11/2/98	WEIR 11/5/98	WEIR 11/9/98	WEIR 11/12/98	WEIR 11/16/98	WEIR 11/19/98	WEIR 11/24/98	DRBC Water Quality Criteria Freshwater Freshwater Acute Chronic	Quality Criteri Freshwater Chronic
Aluminum	mg/L	0.007	0.75	0.738	5550		0.74	0.38	0.214	0.288	0.75	0.087
Antimony	mg/L	0.019	QN	QN	S	QN	QN	S	Q	Q		}
Arsenic	mg/L	0.01	QN	8	S.	Q.	Q.	2	S	2	0.36	0.19
Barium	mg/L	0.001	0.036	0.049	0.102	0.143	0.105	0.092	0.084	0.075		
Beryllium	mg/L	0.001	ON	QN	QN	QN	ΔN	QN	Q.	QN		
Cadmium	mg/L	0.002	0.004	QN	QN	ON	QN	0.004	0.004	0.005	0.02	0.001
Calcium	mg/L	0.001	175	139	111	117	115	111	118	137		
Chromium	mg/L	0.002	0.003	QN	Q.	QN	Q.	S	0.01	QN	0.016	0.011
Cobalt	mg/L	0.006	QN	QN	QN	QN	S	ę	2	SP		
Copper	mg/L	0.002	0.013	0.015	QN	Q	QN	9	Q	Q.	90.0	0.01 b
ς Cyanide	mg/L	0.01	NA	QN	QN	QN	QN	S	Q.	2	0.022	0.0052
<u> </u>	mg/L	0.005	0.638	0.776	1.34	1.67	1.13	0.84	0.656	0.727		
Lead	mg/L	0.001	QN	ON	QN	QN	QN	S	2	Q.	0.048	0.016
Magnesium	mg/L	0.001	104	86.4	75	80.1	79.1	80.8	86.7	97.1		
Manganese	mg/L	0.001	5.66	4.86	80.8	9.1	6.76	7.44	8.67	11.5		
Mercury	mg/L	0.0002	ND	QN	QN	QN	QN	QV	S	QN	0.0024	0.000012
Nickel	mg/L	0.002	0.063	0.051	0.056	0.054	0.056	0.056	0.062	0.071	4.36 b	0.12
Potassium	mg/L	0.051	19.4	15.7	15.4	15.1	17.3	19.9	17	15.5		
Selenium	mg/L	0.001	QN	QN	QN	0.0012	0.002	QN	Q.	QN	0.02	0.005
Silver	mg/L	0.002	ON	QN	QN	QN	QN	QN	N N	QN	0.04	
Sodium	mg/L	0.1	330	678	440	462	361	222	208	227		
Vanadium	mg/L	0.003	QN	ND	QN	QN	ON	QN	QN	ND		
Zinc	mg/L	0.002	10.576	04.35	0.257	0.192	0.267	0.264	0.216	0.349	0.36	0.08
AID - Not Detected												

ND - Not Detected

NA - Not Analyzed

DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.

DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.

The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were used - Chromium VI was lower under these conditions.

Table 3-3. Analytical r water qualit	results y criteri	Analytical results from Pedricktown North CDF discharge plume samples. <u>BOLD</u> ty water quality criteria, shaded cells indicate sample exceeds acute water quality criteria	town Nortl Ils indicate	orth CDF discharge plume samples.	scharge parceds a	olume sar cute wat	nples. B eer quality	<i>OLD</i> type criteria.	indicates	sample exc	BOLD type indicates sample exceeds chronic y criteria.
										DRBC Water	DRBC Water Quality Criteria
PARAMETERS	UNITS	DETECTION	MIX 10/29/98	MIX 11/2/98	MIX 11/5/98	MIX 11/9/98	MIX 11/12/98	MIX 11/16/98	MIX 11/19/98	Freshwater Acute	Freshwater Chronic
Volatile Organic Compounds	ds										
Acetone	µg/L	10	QN	ND	13	QN	18	14	14		
Bromoform	µg/L	19	ND	QN	ND	QN	ND	QΝ	QN		
Dibromochloromethane	µg/L	5	ON	QN	QN	QN	QN	QN	ON		
1,2-dichloroethane	μg/L	2	QN	QN.	Q.	QN.	QN	QN	9		
Pesticides											
4,4'DDE	µg/L	0.12	QN	QN	QN	QN	QN	QN	QN	0.55	0.001
4,4'DDD	µg/L	0.12	ON	QN	QN	QN	QN	QN	QN	0.55	0.001
4,4'DDT	µg/L	0.12	ON	QN	QN	9 N	QN	QN	QN	0.55	0.001
Dissolved Metals											
Aluminum	mg/L	0.007	0.613	0.488	0.314	0.273		0.051	960.0	0.75	0.087
Antimony	mg/L	0.019	ND	ND	ND	ND	QN	QN	ND		
	mg/L	0.01	ND	QN	ND	QN	QN	ND	QN	0.36	0.19
Barium	mg/L	0.001	0.042	0.044	0.044	0.032	0.067	0.032	0.034		
Beryllium	mg/L	0.001	QN	ND	QN	QN	QN	ND	ON		
Cadmium	mg/L	0.002	0.003	QN	ND	QN	QN	QN	QN	0.02 b	0.001 b
Calcium	mg/L	0.001	37.6	82	58.4	44.7	175	4	44.7		
Chromium	mg/L	0.002	QN	Q.	Q.	2	Q	9	ND	0.016 °	0.011 °
Cobalt	mg/L	900.0	QN	QN	QN	Q.	Q	QN	Q	١	
Copper	mg/L	0.002	0.014	0.04	0.004	0.011	0.046	S	Q	0.06 °	0.01
Iron	mg/L	0.005	2.6	0.493	0.344	0.282	2.38	0.058	90.0		
Lead	mg/L	0.001	0.001	QN	Q	Q.	Ð	2	S	0.048	0.016
Magnesium	mg/L	0.001	43.1	66.5	55.1	64.5	69.5	64.7	73.1		
Manganese	mg/L	0.001	0.39	2.61	1.68	0.042	3.21	0.181	2		
Mercury	mg/L	0.0002	QN	QN	ND	ND	Q	9	N	4	0.000012
Nickel	mg/L	0.002	900.0	0.024	0.013	0.0005	0.03	QN	0.044	4.36 b	0.12 °
Potassium	mg/L	0.051	13.8	15.3	14.5	19.2	19.4	18	20.6		
Selenium	mg/L	0.001	ON	0.0012	0.0012	0.0014	0.0012	0.0016	0.0017		0.005
Silver	mg/L	0.002	ND	ND	ND	ND	Q.	ON.	2	0.04	
Sodium	mg/L	0.1	445	370	449	678	454	200	581		
Vanadium	mg/L	0.003	Q	2	Q.	욋	2	2	2	,	0
Zinc	mg/L	0.002	0.087	0.187	0.064	0.015	0.135	0.018	0.009	0.36	0.08

Table 3-3. Continued												
PARAMETERS	UNITS	DE	XIW		MIX	MIX	MIX	$\overline{}$		DRBC Water Quality Criteria Freshwater Freshwater	Quality Criter Freshwater	eria 19r
Total Metals		CIMIT	10/29/98	11/2/98	11/5/98	11/9/98	11/12/98	11/16/98	11/19/98	Acute	Chronic	
Aluminum	ma/L	0.007						0 445	0.474	2	1000	Ţ
Antimony	mg/L	Т			CN	ON	2		0.00	0.70	0.087	Ţ
Arsenic	mg/L	0.01	QN	G	S	2		20.2	0.020	96.0	9,0	Ţ
Barium	mg/L	0.001	0.083	0.047	0.055	0.041	0.086	0.034	0.032	0.30	S .	
Beryllium	mg/L	0.001	9	QN	SN.	Q.	QN	QN	S			I
Cadmium	mg/L	0.002	0.007	S.	S.	2	Q	0.004	0.003	0.02	0 00	ŀ
Calcium	mg/L	0.001	40.9	9.08	9	45.3	99.3	44.5	45.3			I
Chromium	mg/L	0.002		9	S	S	QX	QN	QN	0.016	0.011	°
Cobalt	mg/L	900.0	QV	S	S	₽ P	9	Q	Q)	2:5	
Copper	mg/L	0.002	0.01	8	0.072	9	QN	QN	S	0.06	0 0	ŀ
	mg/L	0.01	ΑN	0.017	S.	S	2	Q	2	0.022	0.0052	I
ron ro	mg/L	0.005	12.6	1.24	2.78	1.36	2.6	0.779	0.721			T
<u>. 1</u>	mg/L	0.001	0.003	QN	S	S	S	QN	Q	0.048	0.016	Γ
Magnesium	mg/L	0.001	47.7	65.7	53.6	65.4	73.9	65.1	73.9			T
Manganese	mg/L	0.001	0.762	2.68	2.67	0.084	5.16	0.22	2			Ī
Mercury	mg/L	0.0002	ND	QN	QN	9	QN ON	QN	QN	0.0021	0.000012	T
Nickel	mg/L	0.002	0.019	0.026	0.027	0.008	0.037	S	2	4.36 b	0.12	۵
Potassium	mg/L	0.051	15	16	14.1	20.2	21.4	16.8	18			Ī
Selenium	mg/L	0.001	0.0014	QN	0.0013	0.0023	0.0016	0.0015	0.0033	0.02	0.005	Π
Silver	mg/L	0.002	0.004	QN	ð	0.004	Q.	900.0	0.006	0.04		Γ
Sodium	mg/L	0.1	502	440	458	700	405	486	568			Γ
Vanadium	mg/L	0.003	0.023	QN	S	0.005	S	ş	Q.			Γ
Zinc	mg/L	0.002	0.142	0.176	0.137	0.018	0.209	0.018	0.008	0.36 b	0.08	م
ND - Not Detected												Γ

Not Detected

NA - Not Analyzed

DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.

DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.

The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were

used - Chromium VI was lower under these conditions.

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the six remaining samples. The dissolved cadmium concentration in one sample was greater than the chronic water quality criteria of 0.001 mg/L. Copper exceeded the chronic water quality criteria of 0.01 mg/L in four samples, with concentrations of 0.011 to 0.046 mg/L and zinc exceeded its chronic water quality criteria of 0.08 mg/L in three samples with concentrations ranging from 0.087 to 0.187 mg/L.

The total concentration of two inorganic elements, aluminum and chromium, exceeded the DRBC acute water quality criteria in at least one discharge plume sample, but comparisons of total inorganic concentrations are given for informational purposes only, as discussed in Section 2.3.1. Total aluminum exceeded the acute water quality criteria in five samples with the concentrations of four samples between 0.982 and 1.6 mg/L compared to the water quality criteria of 0.75 mg/L. One sample had a total concentration of 9.24 mg/L. Chromium slightly exceeded the acute water quality criteria (0.016 mg/L) in one sample, with a concentration of 0.017 mg/L. Four other metals exceeded chronic water quality criteria in at least one sample. Cadmium exceeded its chronic water quality criteria (0.001 mg/L) in 3 samples (0.002 to 0.007 mg/L). Zinc exceeded its chronic water quality criteria (0.08 mg/L) in 4 samples (0.137 to 0.209 mg/L). One sample each of copper (0.012 mg/L) and cyanide (0.017 mg/L) exceeded their chronic water quality criteria of 0.01 and 0.0052 mg/L, respectively.

3.1.2.3 Background Data

Background samples indicate water quality in the river during the dredging operation was below water quality criteria for discharge to the river, but that limited, low levels of metals contamination exists within the river. Two VOCs were detected in a background sample (bromoform and dibromochloromethane), but are believed to represent laboratory error rather than true VOC contamination in the river (Table 3-4). Aluminum was the only dissolved inorganic that exceeded its acute water quality criteria, at just over two times greater the 0.75 mg/L criteria. Three dissolved inorganics had concentrations exceeding chronic water quality criteria in at least one sample, aluminum, cadmium, and copper. Aluminum in one other sample was detected at a concentration of 0.139 mg/L as compared to its chronic water quality criteria of 0.087 mg/L. Cadmium was detected at concentrations of 0.004 and 0.005 mg/L, compared to its chronic water quality criteria of 0.001 mg/L, and copper was detected in one sample at 0.014 mg/L compared to its chronic water quality criteria of 0.01 mg/L.

Only two inorganics, aluminum and cadmium, had total concentrations that exceeded acute water quality criteria, although the cadmium detected just exceeded its acute water quality criteria (Table 3-4). Additional samples of aluminum and cadmium exceeded their chronic water quality criteria, as did one sample of chromium, selenium, and zinc and three copper concentrations. Other than aluminum, the concentrations were very close to the chronic water quality criteria. These included cadmium at 0.004 mg/L (criteria = 0.001 mg/L); chromium at 0.016 mg/L (criteria = 0.011 mg/L); copper between 0.01 and 0.046 mg/L (criteria = 0.01 mg/L); selenium at 0.0072 mg/L (criteria = 0.005 mg/L); and zinc at 0.094 mg/L (criteria = 0.08 mg/L). The aluminum concentrations ranged from 0.217 to 0.425 mg/L, compared to chronic water quality criteria of 0.087 mg/L.



Table 3-4. Analytical results from Pedricktown North CDF background samples. <u>BOLD</u> type indicates sample exceeds chronic water quality criteria, shaded cells indicate sample exceeds acute water quality criteria.

PARAMETERS	0.001 0.001 0.001 0.087
Volatile Organic Compounds	0.001 0.001 0.001 0.001 0.001 0.001
LIMIT 10/29/98 11/12/98 11/16/98 11/19/98 Acute	0.001 0.001 0.001 0.001 0.001 0.001
Volatile Organic Compounds	0.001 ° 0.001 ° 0.001 ° 0.087 ° 0.19
Acetone	0.001 0.001 0.001 0.087
Bromoform	0.001 0.001 0.001 0.087
Dibromochloromethane	0.001 0.001 0.001 0.087
1,2-dichloroethane	0.001 0.001 0.001 0.087
Pesticides	0.001 0.001 0.001 0.087
4,4'DDE	0.001 0.001 0.001 0.087
4,4'DDD	0.001 0.001 0.001 0.087
1.1 1.1	0.001
Dissolved Metals	0.087
Antimony mg/L 0.019 ND ND ND ND ND ND ND ND 0.36 Barium mg/L 0.001 ND ND ND ND ND ND 0.36 Beryllium mg/L 0.001 ND	0.19
Antimony mg/L 0.019 ND ND ND ND ND Arsenic mg/L 0.01 ND ND ND ND ND 0.36 Barium mg/L 0.001 0.041 0.031 0.033 0.038 0.038 Beryllium mg/L 0.001 ND ND ND ND ND Cadmium mg/L 0.002 0.015 ND	0.19
Arsenic mg/L 0.01 ND ND ND ND 0.36 Barium mg/L 0.001 0.041 0.031 0.033 0.038 Beryllium mg/L 0.001 ND ND ND ND Cadmium mg/L 0.002 0.015 ND ND ND 0.02 b Calcium mg/L 0.001 45.4 50.8 53.1 56.1 c 56.1 c c c c c nb ND ND ND ND 0.009 0.016 c c nb	
Barium	
Beryllium mg/L 0.001 ND ND ND ND ND Cadmium mg/L 0.002 0.015 ND ND ND 0.02 b Calcium mg/L 0.001 45.4 50.8 53.1 56.1	0.001
Cadmium mg/L 0.002 0.015 ND ND 0.004 0.02 b Calcium mg/L 0.001 45.4 50.8 53.1 56.1 Chromium mg/L 0.002 ND ND ND 0.009 0.016 c Cobalt mg/L 0.006 ND ND <td>0.001</td>	0.001
Calcium mg/L 0.001 45.4 50.8 53.1 56.1 Chromium mg/L 0.002 ND ND ND 0.009 0.016 c Cobalt mg/L 0.006 ND	T OLOUI '
Chromium mg/L 0.002 ND ND ND 0.009 0.016 c Cobalt mg/L 0.006 ND ND ND ND ND Copper mg/L 0.002 0.014 0.007 ND ND ND 0.06 b Iron mg/L 0.005 2.05 0.126 0.027 0.034	
Cobalt mg/L 0.006 ND ND ND ND Copper mg/L 0.002 0.014 0.007 ND ND 0.06 b Iron mg/L 0.005 2.05 0.126 0.027 0.034	1 0 0 1 1
Copper mg/L 0.002 0.014 0.007 ND ND 0.06 b Iron mg/L 0.005 2.05 0.126 0.027 0.034 Lead mg/L 0.001 0.003 ND ND ND ND 0.048 Magnesium mg/L 0.001 71.3 87.1 101 114 1	0.011
Iron mg/L 0.005 2.05 0.126 0.027 0.034 Lead mg/L 0.001 0.003 ND ND ND 0.048 Magnesium mg/L 0.001 71.3 87.1 101 114 Manganese mg/L 0.001 ND ND ND ND Mercury mg/L 0.0002 ND ND ND ND 0.0024 Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND ND 0.009 0.04 b	0.01
Lead mg/L 0.001 0.003 ND ND ND 0.048 Magnesium mg/L 0.001 71.3 87.1 101 114 Manganese mg/L 0.001 ND ND ND ND Mercury mg/L 0.0002 ND ND ND ND 0.0024 Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND ND 0.009 0.04 b	1 0.01
Magnesium mg/L 0.001 71.3 87.1 101 114 Manganese mg/L 0.001 ND ND ND ND Mercury mg/L 0.0002 ND ND ND ND 0.0024 Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND ND 0.009 0.04 b	1-0000
Manganese mg/L 0.001 ND ND ND ND Mercury mg/L 0.0002 ND ND ND ND 0.0024 Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND ND 0.009 0.04 b	0.016
Mercury mg/L 0.0002 ND ND ND ND 0.0024 Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND ND 0.009 0.04 b	
Nickel mg/L 0.002 0.006 0.006 ND 0.007 4.36 b Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND 0.009 0.04 b	0.000012
Potassium mg/L 0.051 21.6 24.9 28.5 31 Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND 0.009 0.04 b	
Selenium mg/L 0.001 0.0014 0.004 0.0029 0.003 0.02 Silver mg/L 0.002 ND ND ND 0.009 0.04 b	1 0.12
Silver mg/L 0.002 ND ND ND 0.009 0.04 b	0.005
Sodium	
	
Vanadium mg/L 0.003 ND ND ND ND	
Zinc mg/L 0.002 0.026 0.021 0.012 0.006 0.36 b	0.08
Total Metals	1 0.00
Aluminum mg/L 0.007 <u>0.217</u> 8.575 <u>0.425</u> <u>0.34</u> 0.75	0.087
Antimony mg/L 0.019 ND ND ND 0.041	
Arsenic mg/L 0.01 ND ND ND ND 0.36	0.19
Barium mg/L 0.001 0.033 0.078 0.042 0.039	+
Beryllium mg/L 0.001 ND ND ND ND	1
Cadmium mg/L 0.002 0.002 ND ND 0.004 0.02 b	



	UNITS	DETECTION LIMIT	BG 10/29/98	BG 11/12/98	BG 11/16/98	1	DRBC Water Quality Criteria			
PARAMETERS									Freshwat Chronic	
Calcium	mg/L	0.001	44.4	91.3	51.3	54.4				
Chromium	mg/L	0.002	ND	0.016	ND	ND	0.016	С	0.011	- 0
Cobalt	mg/L	0.006	ND	ND	ND	ND				
Copper	mg/L	0.002	ND	0.018	0.046	0.011	0.06	b	0.01	Ŀ
Cyanide	mg/L	0.01	NA	ND	ND	ND	0.022		0.0052	:
Iron	mg/L	0.005	0.611	12.5	0.596	0.485				
Lead	mg/L	0.001	0.002	ND	ND	ND	0.048		0.016	
Magnesium	mg/L	0.001	47.4	91.3	99.2	110				
Manganese	mg/L	0.001	ND	0.476	ND	ND				
Mercury	mg/L	0.0002	ND	ND	ND	ND	0.0024		0.00001	2
Nickel	mg/L	0.002	0.003	0.018	ND	ND	4.36	b	0.12	
Potassium	mg/L	0.051	21.6	27.7	27.7	27.8				
Selenium	mg/L	0.001	0.0033	0.0072	0.0033	0.0043	0.02		0.005	
Silver	mg/L	0.002	0.011	ND	ND	ND	0.04	b		
Sodium	mg/L	0.1	621	867	793	913				
Vanadium	mg/L	0.003	ND	0.028	ND	ND			T	
Zinc	mg/L	0.002	0.046	0.094	0.008	0.005	0.36	b	0.08	

ND - Not Detected

NA - Not Analyzed

3.1.2.4 Comparison of Sample Areas

While the comparison of each group of data to applicable water quality criteria is critical to understanding the potential impacts of the Pedricktown North CDF discharge on the Delaware River, the relationship of the different sample areas provides a relative framework in which to view the contaminant concentrations. For ease of comparison, Figures 3-1 through 3-6 depict graphical representations of the data discussed throughout the above sections, the first three show dissolved metals concentrations, and the latter three show total. The height of each column in the graphs represents the mean concentration of the analyte per data grouping (i.e., weir, discharge plume, and background), and the bars represent the standard deviation of the data. Because the inorganics are present at very different levels, and the relative concentrations of the various inorganics have no relationship to other analytes, the graphs were grouped by

DRBC DDT standards are for total DDT, not individual metabolites. The sum total of all metabolites is the appropriate value to compare to these screening levels.

DRBC water quality standards for these analytes are hardness dependent. Chronic water quality criteria are based on the DRBC guideline of 74 mg/l. Average hardness of mixing zone samples (377 mg/l) was used to determine acute criteria.

The lower of the DRBC water quality standards for Chromium III, which is hardness dependant, and Chromium VI were used - Chromium VI was lower under these conditions.

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level of detections. This grouping of the data provides the most obvious visual analysis, but bears no meaning beyond that.

Of the dissolved metals, aluminum (Figure 3-1) exceeded the acute water quality criteria the most frequently, once in each of the data groupings. However, we can see from the figure that the mean aluminum concentration did not exceed the acute water quality criteria, and the three groupings (weir, discharge plume, and background) do not have different concentrations relative to each other. Comparatively, zinc (Figure 3-2) appears to have higher concentrations in the weir than other data groupings, and the weir mean is just less than the acute water quality criteria. No other dissolved metals that exceeded criteria show a pattern of higher concentrations in the weir, and many of the trace metals (Figure 3-3) appear to occur more frequently in background samples.

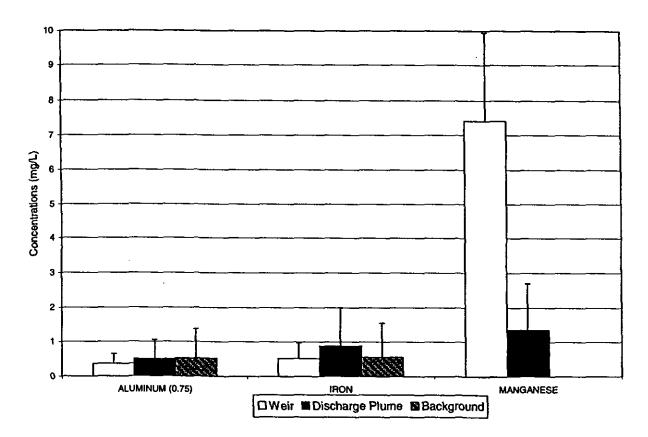


Figure 3-1. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 1 and 10 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

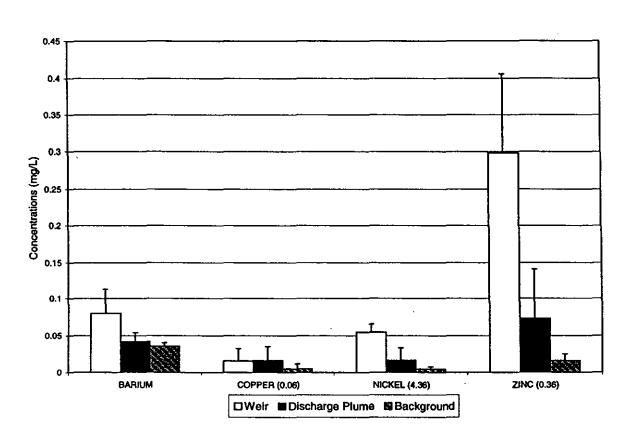


Figure 3-2. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.01 and 0.45 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

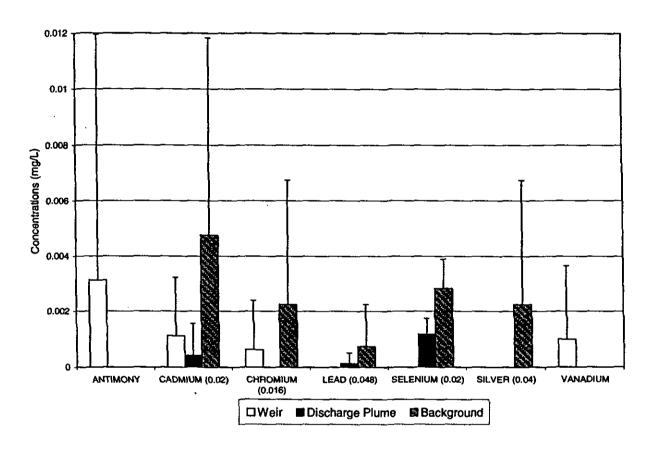


Figure 3-3. Dissolved metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.001 and 0.012 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

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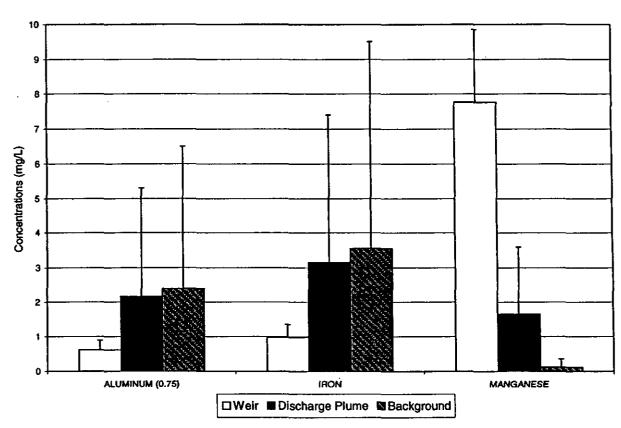


Figure 3-4. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 1 and 10 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

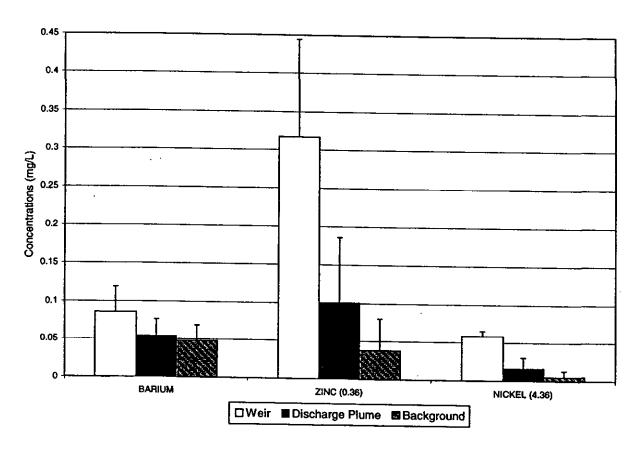


Figure 3-5. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.05 and 0.5 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.

Marine Sale

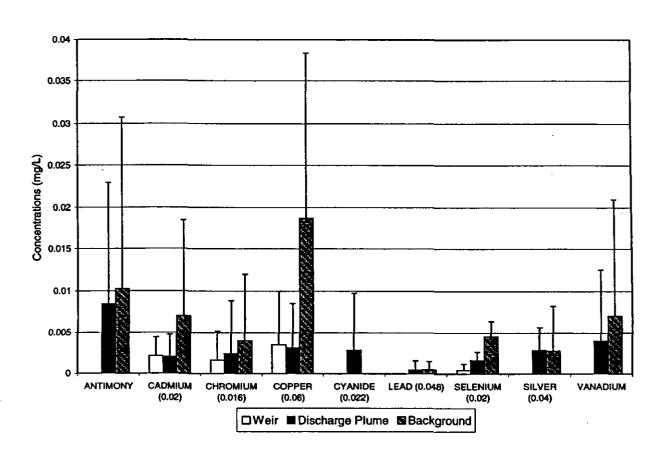


Figure 3-6. Total metals concentrations in the Pedricktown CDF weir, discharge plume, and background samples for analytes with mean concentrations typically between 0.001 and 0.05 mg/L. Standard deviation is shown by the error bars, the DRBC acute water quality criteria is in brackets next to the analyte name.



3.1.3 Total Suspended Solids

The TSS measured from the weir was extremely low indicating that the site efficiently removed suspended solids before discharging into the Delaware River. Weir TSS ranged from 8 to 29 mg/L throughout the study (Figure 3-7). These amounts are below any of the regulatory guidelines presented by the DRBC for various types of effluents.

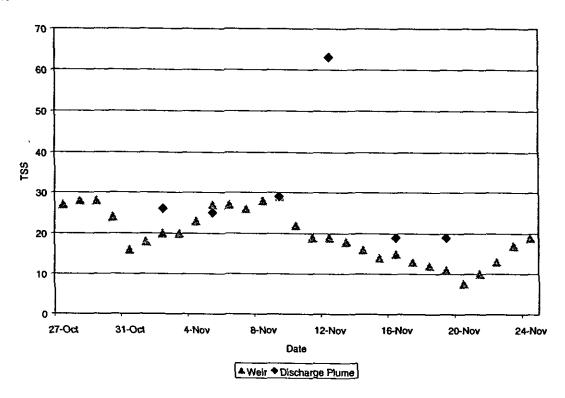


Figure 3-7. Total suspended solids data from the weir and discharge plume samples

The discharge plume TSS at slack tide ranged from 19 to 26 mg/L (Figure 3-7), other than one, unusually high TSS (760 mg/L) that was collected during a period of high wind, which may have affected the validity of the sample. Background TSS was sampled twice, but one of the samples (350 mg/L) may have experienced similar interference from high wind conditions in the field. The other sample, 46 mg/L is similar to the discharge plume data. The influent samples indicate the high level of suspended material anticipated with dredge slurry.

Table 3-5. Total Suspended So Pedricktown CDF st		samples collected for the
Sample ID	Date	mg/L
INLET	10/26/98	32,182
INLET	11/2/98	16,936
INLET	11/5/98	122,405
BG	10/29/98	46
BG	11/12/98	350

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3.1.4 Polychlorinated Biphenyls

Mono- and di-ortho PCB congeners were not detected in weir (using HRGC/HRMS), background, or discharge plume (using HRGC/LRMS) samples (Tables 3-6 and 3-7). Out of 77 possible mono- and di-ortho congeners, 15 were not detected in any influent samples. The remaining 62 were detected in at least one sample each, at levels ranging from 5.4 to 528 ng/L (Table 3-7). Total concentrations of mono- and di-ortho PCB congeners in the Inlet samples ranged from 1204 ng/L to 4218 ng/L.

Low levels of the four non-ortho coplanar PCB congeners were detected in background, weir, and discharge plume locations (Table 3-6). Higher levels associated with the slurry were found in the influent samples. The data, however, have high levels of uncertainty due to laboratory method error. The laboratory report shows detections of non-ortho coplanar PCBs in the method blanks at levels similar to those found in background, weir, and discharge plume samples (Appendix C). USEPA guidance for data usability (USEPA 1994a,b) proscribes that organic compounds detected in site samples at levels less than five times greater than levels detected in method blanks should not be considered detections. Congener 81-TCB was detected in method blanks at levels of 9.6 and 11.3 pg/L, and congener 77-TCB was detected at 19 and 17.6 pg/L. Therefore, if this PCB analysis followed USEPA guidance, levels of 81-TCB below 56.5 pg/L and levels of 77-TCB below 95 pg/L would be considered non-detects, which would include all samples in which these compounds are reported on Tables 3-6 and 3-7. While this guidance was not followed for purposes of this report, it is necessary to critically consider the presence and quantification of non-ortho coplanar PCBs at such low levels.

By comparing the PCB data obtained from this study to the in-depth sediment analysis conducted by Burton (1997), we can draw several conclusions regarding the mobility and toxicity of the PCBs in the Pedricktown North CDF influent and discharge. Sediments in the Marcus Hook reach of the Delaware River navigational channel were recently analyzed using high resolution techniques (Burton 1997). These sediments were found to have the highest concentrations of PCBs in the navigational channel and similar PCB concentrations are exhibited in our influent data. For example, the ranges of the sum of congeners for the dry-weight sediment fraction of the slurry ranged between 49.3 and 70.3 ng/g while the Marcus Hook sediment ranged between 40 and 74 ng/g (Station DRV-6, Burton 1997). In addition, the sediments within the navigational channel were found to have PCB concentrations an order of magnitude lower than the sediments in the shoals of the Delaware.

Burton (1997) estimated the concentration of PCBs in sediment pore water based on a conservative estimate of PCB solubility and the frequency of PCB congeners in the Marcus Hook sediments. This solubility-based estimate was designed to evaluate potential PCB mobilization from hopper dredge overflow. The study extrapolated from the pore water concentrations to determine the concentration of PCBs in the water portion of dredge slurry. This level, found to be 0.0013 µg/L, was shown to be an order of magnitude lower than the human health-based DRBC water quality criteria for PCBs in freshwater. This study quantitatively evaluated concentrations of PCB congeners to lower levels than were achieved in the 1997 study. In fact, the concentrations of PCBs in water



determined through calculations were higher than detected PCB concentrations in the inlet samples.

These findings indicate that dredging within the area of highest known PCB concentrations of the Delaware River navigational channel does not result in PCB concentrations in water that exceed DRBC water quality criteria or present potential human-health risks. In addition, the management of dredge material within the Pedricktown North CDF resulted in substantially lower concentrations of PCBs in weir discharge than inlet samples. Inlet samples had total sums of congeners greater than 1,000 ng/L in all samples, and weir samples had total sums of congeners below 101 pg/L in all samples (0.1 ng/L), representing concentrations of PCBs four orders of magnitude (10,000 times) less than the inlet samples. Thus, the PCB concentrations of the weir discharge are much lower than the DRBC risk-based guidance requires.

3.2 PEDRICKTOWN CONFINED DISPOSAL FACILITY CONTAMINANT LOADINGS

Total contaminant loadings of the Pedricktown CDF were determined by subtracting the total amount of metals and PCBs that were discharged from the weir from the total amount placed in the site. Total inputs were determined by multiplying the contaminant concentrations within dredge slurry by the amount of slurry pumped into the site. The four influent samples were considered to be representative of the material placed in the site for a period of time before and after the sample (i.e., the duration of dredging was divided into four periods, each of which was represented by one influent sample). Total weir discharge amounts were based on the concentrations of the weir samples multiplied by the discharge flow for the applicable time period for the weir sample. Samples were collected from the weir at three or four day intervals (twice per week). The water discharged during the interval between sample collection dates was represented chemically in the following sample date, and physically (i.e., flow) in the interim flow period as recorded by the data-logging flow meter.

Average daily influent flow varied from roughly 2.5 times greater than daily discharge to nearly 40 times greater. The variation in flow, as well as the number of days of active dredging (33) compared to the number of days of weir discharge (29), accounted for a significantly greater amount of material entering the site than leaving, which is clearly the objective of the CDF. In addition, the concentrations of most contaminants in the influent were significantly greater than weir concentrations. Table 3-8 shows the comparison of the total amount of contaminants in the influent and discharge and represents the contaminant loadings to the CDF. The patterns that exist are predictable given the sediment-clinging nature of PCBs and inorganics. Since the majority of these contaminants are sediment-sorbed, and the weir had very low concentrations of suspended material, we expect to see a much greater amount of contaminants enter the CDF than be discharged.

Table 3-6. H	High-resol	olution PCB analytical results for Pedricktown background, weir, and discharge plume	analytical	results fo	r Pedrickt	own bac	kground,	weir, and	d discharg	e plume
·	samples.									
Parameter	Units	Detection Limits	BG 10/29/98	BG 11/12/98	BG 11/16/9	BG 11/19/9	,			
-					8	8				
Non Ortho-Coplanar PCB	olanar PC	B Congeners								
81-TCB	PG/L		6.7	QN	8.19	7.41				
77-TCB	PG/L	12.9	24	94.4	12.9	18.2				
126-PeCB	PG/L	1.09-5.21	Q.	5.93	QN	QN				
169-HxCB	PG/L	1.82-5.54	QN	QN	QN	QN		1		
Parameter	Units	Detection	WEIR	WEIR	WEIR	WEIR	WEIR	WEIF	WEIR	WEIR
		Limits	10/29/98	11/2/98	11/5/98	11/9/98	11/12/98	11/16/98	11/16/98 11/19/98	11/24/98
Non Ortho-Coplanar PCB	olanar PC	၂ပ								
81-TCB	PG/L		S	8	QN	QN	1.7.1	6.86	8.8	QN
77-TCB	PG/L	12.9	47.6	44.4	63.1	QΝ	42.6	34.3	27.4	27.8
126-PeCB	PG/L	1.09-5.21	2	9	S	QN	3.96	ND	2.85	Q
169-HxCB	PG/L	1.82-5.54	S	QN	QV	ΩN	QN	QN [₹]	ON	QN
Parameter	Unita	Detection	ΧĬΨ	MIX	ΧIM	ΧIM	MIX	MIX	MIX	
j		Limits	10/29/98	11/2/98	11/5/98	11/9/98	11/12/98	11/16/98	11/19/98	
Non Ortho-Coplanar PCB	planar PC	B Congeners								
81-TCB	PG/L		9.1	8.34	QN	QN	ND	7.5	96.9	
77-TCB	PG/L	12.9	63.8	29.7	28.2	26.6	37.9	28.6	19.9	
126-PeCB	PG/L	1.09-5.21	9	2.84	QN	QΝ	2.78	QN	Q	,
169-HxCB	PG/L	1.82-5.54	9	2.05	Q	QN	ND	3	ND	



Table 3-7. Hig	h-resol	ution PCB ar	alytical results	for the Pedrickto	own inlet slur	y samples.
-		Detection				<u> </u>
Parameter	Units	Limits	INLET 10/15/98	INLET 10/26/98	INLET 11/2/98	INLET 11/5/98
Non Ortho-Coplana	ar PCB C	ongeners	<u> </u>			
81-TCB	pg/L	6.97-11.11	397	629	160	ND
77-TCB	pg/L	12.9	16767	37030	8336	ND
126-PeCB	pg/L	1.09-5.21	922	1342	371	ND
169-HxCB	pg/L	1.82-5.54	204	288	82.5	ND
Mono- and Di-Orth						
8 Di	ng/L	2.53-7.94	U	Ü	U(EMPC)	U
18 Tri	ng/L	NU	11.9	19.1	6.6	23.0
28 Tri	ng/L	NU	36.5	54,7	18.2	62.7
37 Tri	ng/L	5.8	U	23.3	7.2	22.2
52 Tetra	ng/L	NU	54.0	84.1	26.6	95.9
49 Tetra	ng/L	NU	42.1	68.4	22.4	79.4
47 Tetra	ng/L	NU	25.7	38.2	13.1	45.5
44 Tetra	ng/L	NU	35.1	55.5	17.7	64.4
42 Tetra	ng/L	NU	16.6	23.5	8.3	27.9
64 Tetra	ng/L	NU	25.4	35.8	12.2	24.5
74 Tetra	ng/L	NU	21.1	36.2	10.2	35.6
70 Tetra	ng/L	NU	49.1	84.7	26.2	91.6
66 Tetra	ng/L	2.36-7.94	υ	U	U	U
80 Tetra	ng/L	NU	48.2	80.6	25.2	89.7
60 Tetra	ng/L	NU	25.7	39.9	13.6	45.5
95 Penta	ng/L	NU	67.2	106.8	36.4	133.8
91 Penta	ng/L	NU	13.4	22.2	7.0	26.0
92 Penta	ng/L	NU	17.3	24.4	8.7	32.5
84/101 Penta	ng/L	NÜ	114.0	178.2	57.0	220.4
99 Penta	ng/L	NU	47.8	73.9	23.0	85.5
119 Penta	ng/L	2.36-7.94	U	U	· U	U
97 Penta	ng/L	NU	21.3	34.3	10.3	35.9
86 Penta	ng/L	2.36-7.94	U	U	U	U
87 Penta	ng/L	NU	_33.2	52.7	14.7	58.3
120 Penta	ng/L	5.8	U	17.2	5.4	17.1
110 Penta	ng/L	NU	83.4	130.2	38.8	146.9
82 Penta	ng/L	NU	11.9	21.2	6.5	23.9
123 Penta	ng/L	2.36-7.94	U	U	U	U
118Penta	ng/L	NU	77.0	123.5	36.5	136.4
114 Penta	ng/L	2.36-7.94	U	U	U	U
105/127 Penta	ng/L	NU	30.0	46.4	14.7	48.2
151 Hexa	ng/L	5.8	U	42.2	12.2	53.3
149 Hexa	ng/L	NU	97.6	139.0	46.0	174.5
146 Hexa	ng/L	NÜ	22.7	34.0	11.1	41.1
153 Hexa	ng/L	NU	109.2	168.1	54.3	208.6
168 hexa	ng/L	NU	26.9	42.8	13.0	48.9
141 Hexa	ng/L	NU	20.8	32.7	9.4	39.1
137 Hexa	ng/L	2.36-7.94	U	U	U	U
138 Hexa	ng/L	NU	124.6	184.5	56.6	224.4
158 Hexa	ng/L	5.8-7.71	U	U	5.8	20.1
166 Hexa	ng/L	2.36-7.94	U	U	U	U



Table 3-7. Cor	ntinued					
Parameter	Units	Detection Limits	INLET 10/15/98	INLET 10/26/98	INLET 11/2/98	INLET 11/5/98
128/167 Hexa	ng/L	NU	24.1	35.0	11.5	U
156 Hexa	ng/L	NU	12.3	17.9	5.4	20.1
157 Hexa	ng/L	2.36-7.94	U	U	U	U
179 Hepta	ng/L	ุงบ	16.0	26.0	7.6	32.8
187 Hepta	ng/L	NU	49.3	72.2	22.0	88.0
183 Hepta	ng/L	NU	20.6	27.2	9.4	36.3
185 Hepta	ng/L	2.36-7.94	U	U	U	U
174 Hepta	ng/L	NU	39.0	56.6	19.0	80.8
177 Hepta	ng/L	NU	25.2	40.4	11.2	52.5
171Hepta	ng/L	2.36-5.80	U	17.2	U	20.3
180 Hepta	ng/L	NU	89.2	132.7	41.4	182.4
191 Hepta	ng/L	2.36-7.94	U	U	U	U
170/190 Hepta	ng/L	NU	34.4	60.0	17.4	U
189 Hepta	ng/L	2.36-7.94	U	U	U	U
200 Octa	ng/L	2.36-7.94	U	Ü	UU	υ
198 Octa	ng/L	2.36-7.94	U	Ú	U	U
201 Octa	ng/L	NU	65.0	107.4	33.9	112.8
196/203 Octa	ng/L	23.8	U(EMPC)	68.9	22.3	81.2
195 Octa	ng/L	5.8	U	21.4	6.7	21.5
194 Octa	ng/L	NU	30.7	46.5	16.1	65.1
205 Octa	ng/L	2.36-7.94	υ	U	U	U
208 Nona	ng/L	NU	101.4	173.2	51.3	144.3
207 Nona	ng/L	2.36-7.71	11.8	U	U	17.2
206 Nona	ng/L	NU	204.8	333.7	97.3	293.9
209 Deca	ng/L	NU	329.4	528.4	156.2	485.4
Total Sum of Congeners	ng/L		2381	3922	1213	4218

U - Undetected with a method detection limit given in parenthesis.

EMPC - A peak was detected that did not meet the method identification criteria. The peak areas were used to calculate an estimated maximum possible concentration for the detection limit.

NU - Not used, analyte was detected in all samples.



In total, 7.0 kg of PCBs were introduced into the Pedricktown CDF throughout the maintenance dredging project, compared with only 0.02 kg released (based on non-ortho coplanar results), resulting in a retention of very close to 100 percent. This is because the mono- and di-ortho congeners detected in the influent samples had concentrations several orders of magnitude greater than the non-ortho coplanar congeners, which were the only PCBs detected in weir samples. Any assumption of how to treat non-detects (i.e., half ofthe detection limit) would give similar results. In addition, the validity of the non-ortho congener data is questionable given the detected concentrations in the method blanks. If this data were rejected due to laboratory error, the CDF would show further improved retention of PCBs.

Table 3-8. Influent and discharge contaminant loads associated with the Pedricktown CDF during maintenance dredging operations, using zero for non-detected analytes. The percent of each contaminant sequestered in the CDF is shown in the far right column.

Analyte	CDF Influent		Total Retained by CDF	% Retained by
	(kg)	(kg)	(kg)	CDF
Total PCBs	7.0	0.02	6.98	99.714
Aluminum	1,501,188	135	1,501,052	99.991
Antimony	706		706	100
Arsenic	5.20		5.20	100
Barium	7,543	11.60	7,532	99.846
Beryllium	55.42		55.42	100
Cadmium	186.83	0.53	186.30	99.715
Chromium	5,174	0.50	5,174	99.990
Cobalt	1,888		1,888	100
Copper	3,555	2.77	3,552	99.922
Cyanide	29.64		29.64	100
Iron	1,989,994	393	1,989,602	99.980
Lead	6,862		6,862	100
Manganese	67,910	2,697	65,213	96.028
Mercury	42.16		42.16	100
Nickel	3,502	22.16	3,480	99.367
Selenium	4.50	0.15	4.35	96.747
Silver	84.20		84.20	100
Vanadium	5,156		5,156	100
Zinc	28,073	138	27,935	99.509

Based on the mass balance analysis, we estimate that a total of 3.6 million kg of metals was introduced into the Pedricktown North CDF during the maintenance dredging period. Nearly 3.5 million kg (or 97 percent) of the total metals introduced were aluminum and iron. The presence of aluminum and iron is expected given regional concentrations of these elements; these are basic elements that are commonly found in background samples throughout the mid-Atlantic area. For comparison to reference data, these data were

converted to dry weight concentrations, as opposed to the mg/L slurry obtained for the purposes of this study. The dry weight concentration of aluminum in the inlet samples ranged from 8,600 to 30,000 mg/kg and the dry weight concentration of iron was between 2,600 and 60,000 mg/kg. While there is no known source of applicable, regional background sediment data, the most recent Ecological Risk Assessment guidance documents summarized the geometric mean concentration of several chemicals throughout soils and surficial materials of the Eastern U.S. The geometric mean concentration of aluminum in the Eastern U.S. was 33,000 mg/kg and 14,000 mg/kg was the geometric mean iron concentration.

Given the range and ubiquity of aluminum and iron throughout the country, and particularly within soils of the Eastern Seaboard, their presence in the Marcus Hook sediments is expected. However, neither of these metals has established sediment toxicity criteria, and they are not bio-available or toxic in solid state (i.e., bound within sediments). The most-widely accepted toxicity criteria, Effects-Range Low and Medium (developed by Long and Morgan [1991] and revised by Long et al [1995]), do not include toxicity values for aluminum or iron because limited data exists on the toxicity of these metals. Similarly, no toxicity criteria have been developed to screen aluminum or iron for risks to earthworms (the representative soil invertebrate typically considered as a conservative indicator of potential ecological risk from soil contaminants).

Throughout the dredging operation, nearly 3.5 million kg of metals were placed in the site and less than 3,500 kg of metals were released through the weir. The only inorganic to have greater than 1,000 kg discharged was manganese, which had a total influent of nearly 70,000 kg and a total discharge of roughly 2,700 kg, resulting in a retention of 96 percent. Selenium had the next lowest retention of inorganics, 97 percent. All other metals had retention of 99 to 100 percent.

Aluminum has a historic mean concentration in the Delaware River obtained from the USEPA STORET database of 1.65 mg/L. The highest concentration of total aluminum released from the weir throughout the study was 0.91 mg/L. Similarly, iron concentrations released from the weir never exceed the STORET historic Delaware River concentration of 1.86 mg/L. Clearly, neither aluminum nor iron concentrations present exposures beyond ambient levels, and neither is associated with potential ecological risks.

3.3 TOTAL MAXIMUM DAILY LOAD

The effects of the Pedricktown discharge on the ambient contaminant concentrations in the Delaware River were evaluated using methods similar to total loadings of the CDF. Daily impacts were evaluated, because this allows a more conservative assessment of potential risks to the environment. If we had considered contaminant discharge to the river over the entire month-long period, the low flow of the discharge (3.89*10⁸ liters over the period of discharge) relative to the river flow (118.47 m³/sec or 1.02*10¹⁰ liters over the same 29 day period) might have masked potential



contamination and daily high loads. The data discussed in this section are provided in Appendix D of this report.

Daily cumulative impacts of the Pedricktown discharge were evaluated by multiplying the daily contaminant concentrations of weir samples (each weir sample date was considered representative of the surrounding three- or four-day time period) by the daily discharge as measured with the flow meter. The discharge flow was measured in the most intact and undisrupted discharge pipe of the three at the Pedricktown CDF. The sampled flow was multiplied by three to account for the total flow from the discharge pipes. Given the structure and potentially limited flow of the other pipes, this method of estimating total discharge over-estimates the outflow. Thus, this method is believed to be conservative in estimating potential impacts to the Delaware River.

The ambient river inorganic concentrations were determined using multiple data resources. The DRBC Toxics Management Program provided data on the total and dissolved concentrations of copper, lead, and zinc, and the total mercury concentration (Fikslin 1999). For other metals, data was taken from the USEPA database (USEPA 1999). When a sufficient amount of applicable data was available to draw reasonable conclusions regarding appropriate ambient concentrations, the USEPA data were used. The USEPA data collected from autumn sampling events later than 1985 (1990 for some analytes) were used to obtain total concentrations of aluminum, cadmium, chromium, iron, manganese, and silver. All other inorganic data used to approximate ambient river concentrations came from the background data collected for this study. The mean concentration of the four background samples was used.

Once the data were identified, the first part of this analysis required multiplying the ambient river concentrations by the assumed river flow to obtain the daily river loading in mg. River flow was determined from DRBC (1998), using a conservative, low flow rate of 118.47 m³/sec for the section of river where Pedricktown is located (Zone 5, DRBC 1998). Similarly, daily discharge loads were determined following the same methods used to determine daily discharge for Section 3.2. Daily loading estimates of the river and discharge are provided in Table D-1. Once both river and discharge concentrations were converted to daily loadings, they were summed to determine the cumulative loading of each analyte in the river following discharge from the CDF (Table D-2). Finally, the cumulative loading was divided by the cumulative flow, the sum of the ambient river flow and daily discharge flow, to obtain cumulative concentrations (Table D-3). analytes, but the essential nutrients (calcium, magnesium, potassium, and sodium), total concentrations downstream of the Pedricktown discharge were not changed from ambient river concentrations during most days of the CDF discharge. When changes in river concentrations did occur, no water quality criteria were violated. Non-ortho coplanar PCB loads were not analyzed with this method since the method did not indicate differences between the method blank, background, weir, or discharge plume samples. Similarly, the mono and di-ortho coplanar PCBs were not analyzed because none were detected in the weir samples.

The lack of a substantial change in river concentrations is indicative of the relative flows of the river and the weir discharge and the similarity between the ambient river and



discharge plume sample results. The river flow was on the order of 10 billion L/day. The discharge flow varied from 2 to 20 million L/day. Given the difference in the order of magnitude of the flows (river flow is three to four orders of magnitude or one hundred to one thousand times greater than the discharge flow), discharge concentrations had to be greater than river concentrations by several orders of magnitude to have noticeable cumulative impacts on river concentrations. Actual discharge concentrations were similar to ambient river concentrations in nearly all circumstances. Therefore, this loadings analysis suggests that minimal, if any, impacts resulted from the discharge of the Pedricktown CDF during the period of maintenance dredging of the Marcus Hook reach of the navigation channel.



4.0 SUMMARY

The results of the various methods of analysis used in this study indicate that the discharge from the Pedricktown North CDF weir did not alter water quality within the Delaware River or present environmental risks to the Delaware River biota. Comparisons to water quality criteria indicated that concentrations in the discharge rarely exceeded acute criteria during the study, suggesting that potential risks are low. Acute criteria are the most appropriate screening criteria for the weir discharge data, because acute exposures are considered limited-discharge exposures. Dredging occurs during a short season, and typically individual CDFs are not used in consecutive years. Therefore, CDF discharges are qualitatively different from typical point-source discharges, such as industrial outfalls, because they are not used continuously for long periods of time. The chronic criteria are designed to be protective of aquatic life continuously exposed to a concentration within a discharge source.

Analytes that exceeded DRBC water quality criteria were metals that are present in background samples at levels similar to those in the weir and discharge plume. In addition, samples rarely exceeded criteria by more than a factor of two. Given the conservative assumptions that factor into all aspects of chemical analysis, these methods are designed to be protective of the environment. Comparisons to criteria often overstate, not understate, the potential for risks to occur. Water quality criteria are defined as levels that are protective of human health and the environment, and exceedance of criteria do not necessarily indicate impacts to individuals would occur, and population-level impacts from infrequent, low-level exceedances are unlikely. Typically under USEPA Guidelines for Risk Assessment, site-related contaminant exceedances that result in Environmental Effects Quotients, or the amount by which samples exceed water quality criteria, of less than 10 are not considered to be likely to cause significant impacts to the environment.

Estimations of inputs to the disposal site relative to the discharge from the weir indicated that the Pedricktown North CDF was over 95 percent efficient at trapping contaminants found in the Marcus Hook range sediments. VOCs were not detected in influent or weir samples, and although a few pesticides were detected in influent samples, none were detected at the weir. Mass balance calculations suggested that approximately 7.0 kg of PCBs were pumped into the site and only 0.02 kg were released back into the river through the weir; therefore resulting in a 97.2 percent retention of PCBs. The site was also highly efficient at sequestering heavy metals from the estuary. In total about 3.6 million kg of metals were introduced into the CDF and only 3,500 kg were released throughout the discharge period. Approximately 99 percent of the contaminants introduced to the site and 90 percent of those released from the weir were the metals, aluminum, iron, and manganese, which are among the most common naturally occurring elements.

The results of the daily chemical load analysis indicate that daily impacts on ambient river metals concentrations were very small; often no change resulted from the Pedricktown North CDF discharge. Where changes in river concentrations did occur, no water quality criteria were violated. The conditions that were assumed for the daily

chemical load analysis were highly conservative in many ways. Flow used for ambient river conditions were the lowest available estimates, which could potentially overstate the impacts of the CDF discharge. Since no impacts were determined under these conditions, it is unlikely that impacts would result under less conservative conditions. In addition, under the Delaware River Philadelphia to the Sea sediment PCB analysis (Burton 1997), the sediment in the portion of the Delaware River navigational channel surrounding the Marcus Hook area was found to have the highest concentrations of PCBs in the Philadelphia to the Sea navigational channel. Since the current channel maintenance operation dredged this portion of the channel and did not produce significant impacts to the environment, it is unlikely that less-contaminated sediments would produce impacts. These findings provide additional evidence that contaminants, particularly metals and PCBs, in CDF weir discharges are unlikely to cause environmental impacts to the river.

Finally, it is important to consider, as is mentioned in DNREC (1999), that these results, while conservative in a number of ways, are applicable only to this CDF. Properties of the CDF, such as size, vegetation, and cell structure, play an important role in determining flow through the CDF. It is possible that, given a higher flow or lower residence time, another CDF might have greater contaminant concentrations in the discharge, even if less contaminated sediment was placed in the site. It is also possible that the size, structure, and retention capabilities of the Pedricktown North CDF were beyond what would have been necessary to sequester contaminants from the dredged material. The Pedricktown North CDF has clearly been demonstrated to be highly effective in sequestering contaminants, and may provide a model for management of other CDFs.

These questions can be answered by further investigating the relationship between bulk sediment, influent, CDF properties, and discharge. As we gain data and knowledge describing this relationship, we can highlight key properties of CDFs that may define the ability of a CDF to regulate the potential impacts of dredged material to the environment. This study of the maintenance dredging of the Marcus Hook reach of the Philadelphia to the Sea navigational channel and placement of material into the Pedricktown CDF shows that Delaware River navigational channel sediments can be dredged with no resulting harmful impacts to the environment.

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APPENDIX A

Pedricktown North Confined Disposal Facility Inorganics Laboratory Results

CHAIN-OF-CUSTODY RECORD

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INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: 10/15/98

Date Received: 10/16/98

PACOE Pedricktown

ICP Analysis Date:

12/17/98

Mercury Analysis Date:

11/6/98

GFAA Analysis Date:

11/20/98

Client ID: Lab ID

Project:

INLET 101598 98102567

BLANK **BLK 1105**

LCS LCS 1105

Matrix Unit

Total (mg/L)

Water (mg/L)

Water (mg/L)

Parameter	Method				% Recovery	RL
Aluminum	200.7	567	<0.007	0.211	106	0.007
Antimony	200.7	0.400	<0.019	0.215	108	0.019
Arsenic	206.2	<0.010	<0.010	0.018	90	0.010
Barium	200.7	4.13	<0.001	0.201	101	0.001
Beryllium	200.7	0.031	<0.001	0.204	102	0.001
Cadmium	200.7	0.069	<0.002	0.207	104	0.002
Calcium	200.7	147	0.283	0.203	102	0.001
Chromium	200.7	1.87	<0.002	0.187	94	0.002
Cobalt	200.7	0.646	<0.006	0.194	97	0.006
Copper	200.7	1.28	<0.002	0.187	94	0.002
iron	200.7	1080	0.015	0.211	106	0,005
Lead	239.2	2.28	<0.001	0.020	100	0.001
Magnesium	200.7	239	0.031	0.224	112	0.001
Manganese	200.7	7.01	<0.001	0.199	100	0.001
Mercury	245.1	0.0178	<0.0002	0.0047	94	0.0002
Nickel	200.7	1.60	<0.002	. 0.202	101	0.002
Potassium	200.7	74.4	0.086	0.901	90	0.051
Selenium	270.2	0.0018	<0.001	0.020	100	0.001
Silver	200.7	0.052	<0.002	0.051	102	0.002
Sodium	200.7	275	<0.100	0.202	101	0.100
Thallium	279.2	<0.001	<0.001	0.018	90	0.001
Vanadium	200.7	2.01	<0.003	0.200	. 100	0.003
Zinc	200.7	10.7	<0.002	0.201	101	0,002

9200 Rumsey Road • Suite B102 • Columbia, Maryland 21045-1934 Phone (410) 964-0330 • Fax (410) 740-9306 Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

in 9 837 4 12/450

December 18, 1998

Erin Klingebiel Versar, Inc. 9200 Rumsey Road Columbia, MD 21045-1934

Re: ENVSYS Report #R9812372

Dear Ms. Klingebiel:

Enclosed is the Analytical Data Report for the sample received November 25, 1998 for VOC analysis. This sample has been analyzed according to U.S. EPA protocol and Chain of Custody instructions.

Please do not hesitate to call if you have questions, comments or require additional information.

Sincerely,

Mohan Khare, Ph.D.

President/CEO

MK/cmc

Enclosures

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BG1116

_ab Name: ENVIROSYSTEMS

Contract:

Lab Code: ENVSYS Case No.: V1125 SAS No.:

SDG No. :

Matrix: (soil/water) WATER

Lab Sample ID: 98113044

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: 113044

Level: (low/med) LOW

Date Received: 11/25/98

% Moisture: not dec.

Date Analyzed: 11/25/98

CONCENTRATION UNITS:

GC Column: RTX-502.2 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume:

(uL)

Soil Aliquot Volume: (uL)

	CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L		Q
•	74-97-3	Chl		10	I I
:	74-87-0	Chloromethane_ Bromomethane	 ;	10	10 1
1	75-01-4	Visua Chlorido		10	10 1
ì	75-00-2	Chlonosthans		10	10 1
i	75-09-2		nide !	10	IU I
•	A7-A4-1	Vinyl Chloride Chloroethane Methylene Chlor	. 146	10	10
i	75-15-0	Acetone Carbon Disulfi	'	10	10 1
i	75-35-4	1.1~Dichlornet	hene !	10	iŭ
į	75-34-3	1,1-Dichloroet	hane !	10	iŭ i
		1,2-Dichloroet		10	10
į	67-66-3	Chloroform	"EIS (CO 001) !	10	iŭ i
į	107-06-2	1.2-Dichloroet	hane	10	iŭ i
ì	78-93-3	2-Butanone		10	iŭ i
i	71-55-4	1,1,1-Trichlor	nethane !	10	iŭ
i	54-23-5	Carbon Tetrach	loride	10	IÚ I
į	75-27-4	Bromodichlorom	ethane	10	iŭ i
į	78-87-5	1,2-Dichloropr	nnane	10	iŭ i
i	10061-01-5-	cis-1,3-Dichlo	ranranene !	10	.iu i
i	79-01-6	Trichloroethen	- !	10	IU I
i	124-48-1	Dibromochlorom	ethane !	10	Ü
i	79-00-5	1.1,2-Trichlor	oethane !	10	iŭ i
į	71-43-2	Benzene	!	10	iU
i	10061-02-6-	trans-1,3-Dich	loropropene	10	เบ้
į	75-25-2			10	iŭ
i		4-Methy1-2-Pen	tanone !	10	iΰ
i	591-78-4	2-Hevanone	1	10	iŭ
i	127-18-4	2-Hexanone Tetrachloroeth	ene !	10	ίὖ i
į	79-34-5	1, 1, 2, 2-Tetrac	hloroethane	10	iŭ i
į	108-88-3	Toluene	1	10	iŭ i
i	108-90-7	Chlorobenzene_	· · · · · · · · · · · · · · · · · · ·	10	ΙŬ
•	100-41-4	Ethylbenzene_	 '	10	ΙŬ
į	100-42-5		·	10	iŭ
,	1220-20-7	Styrene Xylene (total)	 '	10	iŭ i
į	1990-50-/	valeue (rocal)		10	

INORGANICS DATA REPORTING SHEET

Versar

Data Camalada	4.4.14.6.10.0					40/47/00
Date Sampled:	11/16/98				Analysis Date:	12/17/98
Date Received:		44-14		-	Analysis Date:	11/6/98
Project:	PACOE Pe	ducktown		GFAA A	Analysis Date:	1/19/99
Client ID:		BG 1116	WEIR 1116	MIX 1116	BG 1119	
Lab ID		98113052	98113053	98113054	98113055	
Matrix		Total	Total	Total	Total	
ปกit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
,		(0 -)	(··· G ·-)	((····g-=/	
Parameter	Method		·			RL
Aluminum	200.7	0.425	0.380	0.446	0.340	0.007
Antimony	200.7	<0.019	<0.019	0.033	0.041	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.042	0.092	0.034	0.039	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	0.004	0.004	0.004	0.002
Calcium	200.7	51.3	111	44.5	54.5	0.001
Chromlum	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Cobait	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.046	<0.002	<0.002	0.011	0.002
Iron	200.7	0.596	0.840	0.779	0.485	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	99.2	80.8	65.1	110	0.001
Manganese	200.7	<0.001	7.44	0.220	<0.001	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	<0.002	0.056	<0.002	<0.002	0.002
Potassium	200.7	27.7	19,9	16.8	27.8	0.051
Selenium	270.2	0.0033	<0.001	0.0015	0.0043	0.001
Silver	200.7	<0.002	<0.002	0.006	0.006	0.002
Sodium	200.7	793	222	486	913	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	< 0.003	<0.003	0.003
Zinc	200.7	0.008	0.264	0.018	0.005	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: 11/2/98 Date Received: 11/13/98

PACOE Pedricktown

ICP Analysis Date: 12/17/98

Mercury Analysis Date:

11/6/98

GFAA Analysis Date:

11/20/98

Client ID: Lab ID Matrix

Project:

MIX 1102 98112893

BLANK **BLK 1117**

LCS LCS 1117 Water

Unit

Total (mg/L) Water (mg/L)

(mg/L)

Parameter	Method_				% Recovery	RL.
Aluminum	200.7	0.982	0.011	0.223	112	0.007
Antimony	200.7	<0.019	<0.019	0.217	109	0,019
Arsenic	206.2	<0.010	<0.010	0.020	100	0.010
Barlum	200.7	0.047	<0.001	0.190	95	0.001
Beryilium	200.7	<0.001	<0.001	0.204	102	0.001
Cadmium	200.7	<0.002	<0.002	0.204	102	0.002
Calcium	200.7	80.6	0.657	0.196	98	0.001
Chromium	200.7	<0.002	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	<0.006	0.198	99	0.006
Copper	200.7	<0.002	<0.002	0.199	100	0.002
lron	200.7	1.24	0.017	0.22	110	0.005
Lead	239.2	<0.001	<0.001	0.020	100	0.001
Magnesium	200.7	65.7	0.030	0.208	104	0.001
Manganese	200.7	2.68	<0.001	0.200	100	0.001
Mercury	245.1	<0.0002	< 0.0002	0.0043	86	0.0002
Nickel	200.7	0.026	<0.002	. 0.205	. 103	0.002
Potassium	200.7	16.0	0.062	0.934	93	0.051
Selenium	270.2	<0.001	<0.001	0.020	100	0.001
Silver	200.7	<0.002	<0.002	0.052	104	0.002
Sodium	200.7	440	<0.100	0.229	115	0.100
Thallium	279.2	< 0.001	<0.001	0.018	90	0.001
Vanadium	200.7	<0.003	<0.003	0.203	. 102	0.003
Zinc	200.7	0,176	<0.002	0.196	98	0.002

Zinc

200.7

0.018

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/5/98	ICP Analysis Date:	11/20/98
Date Received:	11/13/98	Mercury Analysis Date:	
Project:	PACOE Pedricktown	GFAA Analysis Nata	11/20/08

Client ID:		MIX 1109	MIX 110598	INLET 110598	WEIR 110598	
Lab ID		98112887	98112888	98112889	98112890	4
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	Method	_			_	RL
Aluminum	200.7	1.19	1.22	567	0.885	0.007
Antimony	200.7	<0.019	<0.019	0.580	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.041	0.055	6.18	0.102	0.001
Beryllium	200.7	<0.001	<0.001	0.029	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	0.079	<0.002	0.002
Calcium	200.7	45.3	60.0	334	111	0.001
Chromium	200.7	<0.002	<0.002	2.00	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	0.844	<0.006	0.006
Copper	200.7	<0.002	0.012	1.48	<0.002	0.002
Iron	200.7	1.36	2.78	1470	1.34	0.005
Lead	239.2	< 0.001	<0.001	2.24	<0.001	0.001
Magnesium	200.7	65.4	53.6	349	75.0	0.001
Manganese	200.7	0.084	2.67	144	80.8	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.008	0.027	1.73	0.056	0.002
Potassium	200.7	20.2	14.1	111	15.4	0.051
Selenium	270.2	0.0023	0.0013	0.0033	<0.001	0.001
Silver	200.7	0.004	<0.002	0.063	<0.002	0.002
Sodium	200.7	700	458	352	440	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	0.005	<0.003	2.14	. <0.003	0.003

0.137

10.1

0.257

0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project:	11/12/98 11/13/98 PACOE Pe	dricktown		Mercury .	ICP Analysis Date: Mercury Analysis Date: GFAA Analysis Date:		
Client ID:		MIX 1112	WEIR 1112	BG 1112	WEIR 1109		
Lab iD		98112883	98112884	98112885	98112886		
Matrix		Total	Total	Total	Total		
Unit		(mg/ L)	(mg/L)	(mg/L)	(mg/L)		
Parameter	Method				_	RL	
Aluminum	200.7	1.60	0.740	8.57	0.910	0.007	
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019	
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.01	
Barium	200.7	0.086	0.105	0.078	0.143	0.001	
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001	
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002	
Calcium	200.7	99.3	115	91.3	117	0.001	
Chromlum	200.7	<0.002	<0.002	0.016	<0.002	0.002	
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006	
Copper	200.7	<0.002	<0.002	0.018	<0.002	0.002	
lron	200.7	2.60	1.13	12.5	1.67	0.005	
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001	
Magnesium	200.7	73.9	79.1	91.3	80.1	0.001	
Manganese	200.7	5.16	6.76	0.476	9.10	0.001	
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	
Nickel	200.7	0.037	0.056	0.018	0.054	0.002	
Potassium	200.7	21.4	17.3	27.7	15.1	0.051	
Selenium	270.2	0.0016	0.002	0.0072	0.0012	0.001	
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002	
Sodium	200.7	405	361	867	462	0.100	
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001	
Vanadium	200.7	<0.003	<0.003	0.028	_ <0.003	0.003	
Zinc	200.7	0.209	0.267	0.094	0.192	0.002	

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:	11/3/98		11/20/98			
Date Received:	11/3/98	Mercury Analysis Date:				11/6/98
Project:	PACOE Pe	dricktown GFAA Analysis Date:				11/20/98
Client ID:		BG 102998	INLET 101598	MIX 102998	WEIR 102998	
Lab ID		98112754	98112755	98112756	98112757	
Matrix		Total	Total	Total	Total	
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
_						
<u>Parameter</u>	Method				_	RL
Aluminum	200.7	0.217	663	9.24	0.750	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.033	3,54	0.083	0,036	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	0.024	0.078	0.007	0.004	0.002
Calcium	200.7	44.4	169	40.9	175	0.001
Chromium	200.7	<0.002	2.26	0.017	0.003	0.002
Cobalt	200.7	<0.006	0.778	<0.006	<0.006	0.006
Copper	200.7	<0.002	1.532	0.010	0.013	0.002
iron	200.7	0.611	127	12.6	0.638	0.005
Lead	239.2	0.002	2.79	0.003	< 0.001	0.001
Magnesium	200.7	47.4	275	47.7	104	0.001
Manganese	200.7	<0.001	9.70	0.762	5.66	0.001
Mercury	245.1	<0.0002	0.0211	<0.0002	< 0.0002	0.0002
Nickel	200.7	0.003	1.77	0.019	0.063	0.002
Potassium	200.7	21.6	8.52	15.0	19.4	0.051
Selenium	270.2	0.0033	0.0014	0.0014	<0.001	0.001
Silver	200.7	0.011	<0.002	0.004	< 0.002	0.002
Sodium	200.7	621	83.3	502	330	0.100
Thailium	279.2	<0.001	<0.001	<0.001	< 0.001	0.001
Vanadium	200.7	<0.003	2.36	0.023	<0.003	0.003
Zinc	200.7	0.046	12.1	0.142	0.578	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:

11/3/98

ICP Analysis Date:

11/20/98

Date Received:

11/3/98

Mercury Analysis Date:

11/6/98

Borrow Co.

200.7

200.7

Vanadium

Zinc

1.92

12.4

Project:

PACOE Pedricktown

GFAA Analysis Date:

11/20/98

Client iD: Lab ID

INLET 102698 98112750

INLET 1102 98112751

WEIR 1102 98112753

Matrix Unit

Total Total (mg/L) (mg/L)

Total (mg/L)

Method RL **Parameter** Aluminum 200.7 625 577 0.738 0,007 200.7 0.400 0.540 Antimony <0.019 0.019 206.2 < 0.010 0.013 Arsenic <0.010 0.010 200.7 1.82 0.049 0.001 Barium 1.72 Beryllium 200.7 0.043 0.037 < 0.001 0.001 0.080 Cadmium 200.7 0.071 < 0.002 0.002 200.7 199 154 139 0.001 Calcium Chromium 200.7 2.13 2.05 <0.002 0.002 0.801 Cobalt 200.7 0.713 <0,006 0.006 1.59 Copper 200.7 1.14 0.015 0.002 Iron 200.7 1260 1140 0.776 0.005 239.2 3.35 2.66 Lead < 0.001 0.001 260 200.7 290 86.4 0.001 Magnesium Manganese 200.7 9.70 0.023 4.86 0.001 < 0.0002 0.0002 Mercury 245.1 0.0237 0.0139 200.7 1.71 0.009 0.051 0.002 Nickel 85.2 76.5 0.051 200.7 15.7 **Potassium** Selenium 270.2 0.0018 0.0018 < 0.001 0.001 <0.002 0.002 200.7 0.058 0.052 Silver 200.7 56.0 131 678 0.100 Sodium < 0.001 0.001 Thailium 279.2 < 0.001 < 0.001

2.01

10.7

< 0.003

0.414

0.003

0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project:		edricktown		ICP A Mercury A GFAA A	12/17/98 11/6/98 1/19/99	
Client ID:		WEIR 1119	MIX 1119	WEIR 1124	EB 112598	
Lab ID		98113056	98113057	98113058	98113059	
Matrix		Total	Total	Total	Total	
Unit .		(mg/ L)	(mg/L)	(mg/L)	(mg/L)	
<u>Parameter</u>	Method				_	RL
Aluminum	200.7	0.214	0.471	0.288	<0.007	0.007
Antimony	200.7	<0.019	0.026	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.084	0.032	0.075	<0.001	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	0.004	0.003	0.005	0.003	0.002
Calcium	200.7	118	45.3	137	0.500	0.001
Chromium	200.7	0.010	< 0.002	<0.002	0.005	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Iron	200.7	0.656	0.721	0.727	0.008	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	86.7	73.9	97.1	0.087	0.001
Manganese	200.7	8.67	<0.001	11.5	0.009	0.001
Mercury	245.1	< 0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.062	<0.002	0.071	<0.002	0.002
Potassium	200.7	17.0	18.0	15.5	0.195	0.051
Selenium	270.2	<0.001	0.0033	<0.001	<0.001	0.001
Silver	200.7	<0.002	0.006	<0.002	<0.002	0.002
Sodium	200.7	208	568	227	<0.100	0.100
Thallium	279.2	< 0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.216	0.008	0.349	<0.002	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:

N/A

ICP Analysis Date:

12/17/98

Date Received:

N/A

Mercury Analysis Date:

11/6/98

Project:

PACOE Pedricktown

GFAA Analysis Date:

1/19/99

Client ID:

BLANK

LCS

Lab ID Matrix BLK 1209.

LCS 1209 Water

Unit

Water (mg/L)

(mg/L)

Parameter	Method			% Recovery	RL
Aluminum	200.7	<0.007	0.203	102	0.007
Antimony	200.7	<0.019	0.211	106	0.019
Arsenic	206.2	<0.010	0.023	115	0.010
Barium	200.7	<0.001	0.203	102	0.001
Beryllium	200.7	<0.001	0.205	103	0.001
Cadmium	200.7	<0.002	0,208	104	0.002
Calcium	200.7	0.572	0.216	108	0.001
Chromium	200.7	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	0.200	100	0.006
Copper	200.7	<0.002	0.203	102	0.002
Iron	200.7	<0.005	0.189	95	0.005
Lead	239.2	<0.001	0.021	105	0.001
Magnesium	200.7	0.047	0.232	116	0.001
Manganese	200.7	<0.001	0.203	102	0.001
Mercury	245.1	<0.0002	0.0045	90	0.0002
Nickel	200.7	<0.002	0.206	103	0.002
Potassium	200.7	0.099	1.01	101	0.051
Seienium	270.2	<0.001	0.020	100	0.001
Silver	200.7	<0.002	0.050	100	0.002
Sodium	200.7	<0.100	0.205	103	0.100
Thallium	279.2	<0.001	0.020	100	0.001
Vanadium	200.7	<0.003	0.201	101	0.003
Zinc	200.7	0.006	0.205	103	0.002

Prepared for: Versar, Inc. By: Envirosystems, Inc.

CYANIDE

Method: 9010

Analysis Date: 11/16/98

Units: mg/L

 Client ID
 Lab ID
 Date Samp. Date Rec.
 .

 INLET 102698
 98112750
 10/26/98
 11/3/98
 <0.010</td>

 Lab Blank
 <0.010</td>

 Blank Spike (LCS)
 0.092

 Spike Recovery
 92%

Prepared for: Versar, Inc.

Ву:

Envirosystems, inc.

	Method: Analysis Date: Units:		9010 11/16/98 mg/L	
Client ID	Lab ID	Date Samp.		
MIX 1112	98112883	11/12/98	11/13/98	<0.010
WEIR 1112	98112884	11/12/98	11/13/98	<0.010
BG 1112	98112885	11/12/98	11/13/98	<0.010
WEIR 1109	98112886	11/9/98	11/13/98	<0.010
MIX 1109	98112887	11/9/98	11/13/98	<0.010
MIX 110598	98112888	11/9/98	11/13/98	<0.010
INLET 110598	98112889	11/5/98	11/13/98	0.045
WEIR 110598	98112890	11/5/98	11/13/98	<0.010
Lab Blank				<0.010
Blank Spike (LCS)				0.092
Spike Recovery				92%

Envirosystems, Inc

9200 Rumsey Road Suite B102, Columbia MD 21045 (410) 964-0330 Fax (410) 740-9306

Prepared for:

Versar, Inc.

By:

Envirosystems, Inc.

CYA	NIDE
-----	------

Method:

9010

Analysis Date:

11/16/98

			Units:	mg/L
Client ID	Lab ID	Date Samp.	Date Rec.	
WEIR 1102	98112891	11/2/98	11/13/98	<0.010
INLET 1102	98112892	11/2/98	11/13/98	0.016
MIX 1102	98112893	11/2/98	11/13/98	0.017
Lab Blank			·	<0.010
Blank Spike (LCS)				0.092
Spike Recovery	· · ·			92%

Prepared for: Versar, inc. Ву: Envirosystems, Inc.

		Ana	Method: lysis Date: Units:	9010 11/30/98 mg/L
Client ID	Lab ID	Date Samp.	Date Rec.	
-BG 1116	98113052	11/16/98	11/30/98	<0.010
-WEIR 1116	98113053	11/16/98	11/30/98	<0.010
:MIX 1116	98113054	11/16/98	11/30/98	<0.010
BG 1119	98113055	11/19/98	11/30/98	<0.010
WEIR 1119	98113056	11/19/98	11/30/98	<0.010
-MIX 1119	98113057	11/19/98	11/30/98	<0.010
-WEIR 1124	98113058	11/24/98	11/30/98	<0.010
EB 112598	98113059	11/25/98	11/30/98	<0.010
Lab Blank		···		<0.010
Blank Spike (LCS)		***		0.086
Spike Recovery		-		86%

Envirosystems, Inc 9200 Rumsey Road Suite B102, Columbia MD 21045 (410) 964-0330 Fax (410) 740-9308

INORGANICS DATA REPORTING SHEET

Versar

Da	te Sampled: te Received: oject:	11/3/98 11/3/98 PACOE Pe	dricktown		Mercury A	ICP Analysis Date: Mercury Analysis Date: GFAA Analysis Date:		
Cli	ent ID:		MIX 1102	WEIR 1102	BG 102998	MIX 102998		
La	b ID		98112752	98112753	98112754	98112756		
Ma	atrix		Dissolved	Dissolved	Dissolved	Dissolved		
Un	iit		(mg/ L)	(mg/L)	(mg/L)	(mg/L)		
Pa	rameter	Method					RL	
Ale	uminum	200.7	0.488	0.166	1.80	0.613	0.007	
An	itimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019	
Ar	senic	206.2	<0.010	<0.010	<0.010	<0.010	0.010	
Ba	rium	200.7	0.044	0.045	0.041	0.042	0.001	
Be	eryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001	
Ca	admium	200.7	[^] <0.002	< 0.002	0.015	0.003	0.002	
Ca	aicium	200.7	82.0	147	45.4	37,6	0.001	
C	nromium	200.7	<0.002	<0.002	<0.002	<0.002	0.002	
Co	obait	200.7	<0,006	<0.006	<0.006	<0.006	0.006	
C	opper	200.7	0.040	800.0	0.014	0.014	0.002	
lre	on	200.7	0.493	0.135	2.05	2.60	0.005	
Le	ead	239,2	<0.001	<0.001	0.003	0.001	0.001	
M	agnesium	200,7	66.5	91.2	71.3	43.1	0.001	
M	anganese	200.7	2.61	4.91	<0.001	0.390	0.001	
M	ercury	245.1	<0.0002	<0.0002	< 0.0002	<0.0002	0.0002	
Ni	ickel	200.7	0.024	0.047 .	0.006	0.006	0.002	
P	otassium	200.7	15.3	16.5	21.6	13.8	0.051	
	elenium	270.2	0.0012	<0.001	0.0014	<0.001	0.001	
S	ilver	200,7	<0.002	< 0.002	<0.002	<0.002	0.002	
	odium	200.7	370	379	661	445	0.100	
	hallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001	
V	anadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003	
Z	inc	200.7	0.187	0.375	0.026	0.087	0.002	

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:

11/3/98

ICP Analysis Date:

11/20/98

Date Received:

11/3/98

Mercury Analysis Date:

11/6/98

Project:

PACOE Pedricktown

GFAA Analysis Date:

11/20/98

Client ID:

WEIR 102998

BLANK

LCS

Lab ID

98112757

BLK 1105

LCS 1105

Matrix Unit

Dissolved (mg/L)

Water (mg/L) Water (mg/L)

Param
Alumir
Antimo
Arseni
Bariun

Parameter	Method				% Recovery	RL
Aluminum	200.7	0.295	<0.007	0.211	106	0.007
Antimony	200.7	<0.019	<0.019	0.215	108	0.019
Arsenic	206.2	<0.010	<0.010	0.018	90	0.010
Barium	200.7	0.024	<0.001	0.201	101	0.001
Beryllium	200.7	<0.001	<0.001	0.204	102	0.001
Cadmium	200.7	0.005	<0.002	0.207	104	0.002
Calcium	200.7	140	0.283	0.203	102	0.001
Chromium	200.7	<0.002	<0.002	0.187	94	0.002
Cobalt	200.7	<0.006	<0.006	0.194	97	0.006
Copper	200.7	0.018	<0.002	0.187	94	0.002
lron	200.7	0.305	0.015	0.211	106	0.005
Lead	239.2	<0.001	<0.001	0.020	100	0.001
Magnesium	200.7	69.5	0.031	0.224	112	0.001
Manganese	200.7	3.96	<0.001	0.199	100	0.001
Mercury	245.1	<0.0002	<0.0002	0.0047	94	0.0002
Nickel	200.7	0.048	<0.002 .	0.202	101	0.002
Potassium	200.7	12.5	0.086	0.901	90	0.051
Selenium	270.2	<0.001	<0.001	0.020	100	0.001
Silver	200.7	<0.002	<0.002	0.051	102	0.002
Sodium	200.7	286	<0.100	0.202	101	0.100
Thallium	279.2	<0.001	<0.001	0.018	90	0.001
Vanadium	200.7	0.007	<0.003	0.200	. 100	0.003
Zinc	200.7	0.518	<0.002	0.201	101	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project:	11/12/98 11/13/98 PACOE Pe	dricktown		Mercury A	ICP Analysis Date: Mercury Analysis Date: GFAA Analysis Date:		
Client ID:		MIX 1112	WEIR 1112	BG 1112	WEIR 1109		
Lab ID		98112883	98112884	98112885	98112886		
Matrix		Dissolved	Dissolved	Dissolved	Dissolved		
Unit		(mg/L)	(mg/L)	(mg/L)	(mg/L)		
Parameter Parame	Method					RL	
Aluminum	200.7	1.68	0.656	0.139	0.893	0.007	
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019	
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010	
Barium	200.7	0.067	0.101	0.031	0.133	0.001	
Beryllium	200.7	< 0.001	< 0.001	<0.001	<0.001	0.001	
Cadmium	200.7	< 0.002	<0.002	<0.002	<0.002	0.002	
Calcium	200.7	175	115	50.8	114	0.001	
Chromium	200.7	<0.002	0.005	<0.002	<0.002	0.002	
Cobalt	200.7	<0.006	<0.006	<0,006	<0.006	0,006	
Copper	200.7	0.046	<0.002	0.007	0.011	0.002	
iron	200.7	2.36	0.762	0.126	1.52	0.005	
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001	
Magnesium	200.7	69.5	77.9	87.1	77.8	0.001	
Manganese	200.7	3.21	6.59	<0.001	8.37	0.001	
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	
Nickel	200.7	0.030	0.044	0.006	0.057	0.002	
Potassium	200.7	19.4	17.3	24.9	14.0	0.051	
Selenium	270.2	0.0012	<0.001	0.004	<0.001	0.001	
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002	
Sodium	200.7	454	423	890	418	0.100	
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001	
Vanadium	200.7	< 0.003	<0.003	<0.003	<0.003	0.003	
Zinc	200.7	0.135	0.263	0.021	0.194	0.002	

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project: Client ID: Lab ID Matrix	11/5/98 11/13/98 PACOE Pe	MIX 1109 98112887 Dissolved	MIX 110598 98112888 Dissolved	Mercury A GFAA A INLET 110598 98112889 Dissolved	11/20/98 11/18/98 11/20/98	
Unit .		(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Parameter	Method				_	RL
Aluminum	200.7	0.273	0.314	0.387	0.480	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.032	0.044	0.267	0.096	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmium	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	44.7	58.4	101	117	0.001
Chromium	200.7	<0.002	<0.002	0,003	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.011	0.004	0.018	0.035	0.002
Iron	200.7	0.282	0.344	3.66	0.596	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	64.5	55.1	75.4	79.3	0.001
Manganese	200.7	0.042	1.68	9.96	7.78	0.001
Mercury	245.1	<0.0002	<0.0002	< 0.0002	<0.0002	0.0002
Nickel	200.7	0.005	0.013	0.046	0.055	0.002
Potassium	200.7	19.2	14.5	14.3	15.3	0.051
Selenium	270.2	0.0014	0.0012	0.0023	<0.001	0.001
Silver	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Sodium	200.7	678	449	454	344	0.100
Thallium	279.2	<0.001	< 0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	<0.003	<0.003	<0.003	0.003
Zinc	200.7	0.015	0.064	0.019	0.251	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled:

N/A

ICP Analysis Date:

11/20/98

Date Received:

N/A

Mercury Analysis Date:

11/18/98

Project:

PACOE Pedricktown

GFAA Analysis Date:

11/20/98

Client ID:

BLANK

LCS

Lab ID Matrix

BLK 1117

LCS 1117

Water (mg/L) Water

Unit

(mg/L)

Parameter	Method			% Recovery	RL.
Aluminum	200.7	0.011	0.223	112	0.007
Antimony	200.7	<0.019	0.217	109	0.019
Arsenic	206.2	<0.010	0.022	110	0.001
Barium	200.7	<0.001	0.190	95	0.001
Beryllium	200.7	<0.001	0.204	102	0.001
Cadmium	200.7	<0.002	0.204	102	0.002
Calcium	200.7	0.657	0.196	98	0.001
Chromium	200.7	<0.002	0.194	97	0.002
Cobalt	200.7	<0.006	0.198	99	0.006
Copper	200.7	<0.002	0.199	100	0.002
iron	200.7	0.017	0.22	110	0.005
Lead	239.2	<0.001	0.020	100	0.001
Magnesium	200.7	0.030	0.208	104	0.001
Manganes e	200.7	<0.001	0.200	100	0.001
Mercury	245.1	<0.0002	0.0043	86	0.0002
Nickel	200.7	<0.002	0.205	103 .	0.002
Potassium	200.7	0.062	0.934	93	0.051
Selenium	270.2	<0.001	0.020	100	0.001
Silver	200.7	<0.002	0.052	104	0.002
Sodium	200.7	<0.100	0.229	115	0.100
Thallium	279.2	<0.001	0.018	90	0.001
Vanadium	200.7	<0.003	0.203	102	0.003
Zinc	200.7	<0.002	0.196	98	0.002

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project:	11/16/98 11/30/98 PACOE Pe	dricktown		Mercury A	ICP Analysis Date: Mercury Analysis Date: GFAA Analysis Date:		
Cilent ID:		BG 1116	WEIR 1116	MIX 1116	BG 1119		
Lab ID		98113052	98113053	98113054	98113055		
Matrix		Dissolved	Dissolved	Dissolved	Dissolved		
Unit '		(mg/ L)	(mg/L)	(mg/L)	(mg/L)		
Parameter	Method				_	RL	
Aluminum	200.7	0.057	0.126	0.051	0.084	0.007	
Antimony	200.7	< 0.019	0.025	<0.019	<0.019	0.019	
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010	
Barium	200,7	0.033	0.084	0.032	0.038	0.001	
Beryllium	200.7	<0.001	<0.001	<0.001	< 0.001	0.001	
Cadmium	200.7	<0.002	0.004	<0.002	0.004	0.002	
Calcium	200.7	53.1	117	44.0	56.1	0.001	
Chromium	200.7	<0.002	<0.002	<0.002	0.009	0.002	
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006	
Copper	200.7	<0.002	0.003	<0.002	<0.002	0.002	
lron	200,7	0.027	0.285	0.058	0.034	0.005	
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001	
Magnesium	200.7	101	84.4	64.7	114	0.001	
Manganese	200,7	<0.001	6.91	0.181	<0.001	0.001	
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	
Nickel	200.7	<0.002	0.059	<0.002	0.007	0.002	
Potassium	200.7	28.5	17.5	18.0	31.0	0.051	
Selenium	270.2	0.0029	< 0.001	0.0016	0.003	0.001	
Silver	200.7	<0.002	<0.002	<0.002	0.009	0.002	
Sodium	200.7	89.0	232	500	961	0.100	
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001	
Vanadium	200.7	<0.003	< 0.003	<0.003	· <0.003	0.003	
Zinc	200.7	0.012	0.248	0.018	0.006	0.002	

INORGANICS DATA REPORTING SHEET

Versar

Date Sampled: Date Received: Project: Client ID: Lab ID Matrix Unit	11/16/98 11/30/98 PACOE Pe	edricktown WEIR 1119 98113056 Dissolved (mg/L)	MIX 1119 98113057 Dissolved (mg/L)	Mercury A	Analysis Date: Analysis Date: Analysis Date: EB 112598 98113059 Dissolved (mg/L)	12/17/98 11/6/98 1/19/99
Parameter	Method					RL
Aluminum	200.7	0.099	0.096	0.135	<0.001	0.007
Antimony	200.7	<0.019	<0.019	<0.019	<0.019	0.019
Arsenic	206.2	<0.010	<0.010	<0.010	<0.010	0.010
Barium	200.7	0.082	0.034	0.075	<0.001	0.001
Beryllium	200.7	<0.001	<0.001	<0.001	<0.001	0.001
Cadmlum	200.7	<0.002	<0.002	<0.002	<0.002	0.002
Calcium	200.7	113	44.7	134	0.474	0.001
Chromium	200.7	<0.002	< 0.002	<0.002	<0.002	0.002
Cobalt	200.7	<0.006	<0.006	<0.006	<0.006	0.006
Copper	200.7	0.046	<0.002	0.007	< 0.002	0.002
iron	200.7	0.284	0.060	0.292	<0.005	0.005
Lead	239.2	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium	200.7	83.4	73.1	95.1	0.053	0.001
Manganes e	200.7	8.67	< 0.001	12.2	0.005	0.001
Mercury	245.1	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Nickel	200.7	0.051	0.044	0.078	<0.002	0.002
Potassium	200.7	18.0	20.6	17.7	0.175	0.051
Selenium	270.2	<0.001	0.0017	< 0.001	<0.001	0.001
Silver	200.7	<0.002	< 0.002	< 0.002	< 0.002	0.002
Sodium	200.7	242	581	242	0.378	0.100
Thallium	279.2	<0.001	<0.001	<0.001	<0.001	0.001
Vanadium	200.7	<0.003	< 0.003	< 0.003	×0.003	0.003
Zinc	200.7	0.203	0.009	0.333	<0.002	0.002

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APPENDIX B

Pedricktown North Confined Disposal Facility Volatile Organics, Semi-Volatile Organics, and Pesticides Laboratory Results Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810411-01 Client Sample ID: INLET 101598/WATER Site/Work ID: PEDERICKTON Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water

Date Collected: 10/15/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: 10/21/98 Instrument: HP9 Method: 8081A\3510C Analyst: ECL Run ID: R54908 Analysis Date: 10/25/98 Time:

Lab File ID: 971 Batch : WG48292

CAS #	Compound	Units	Result Q	ualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.06	1.2
319-85-7	Deta-BHC	ug/L		ND	0.06	
319-86-8	delta-BHC	ug/L		ND	0.06	1.2 1.2
58-89-9	gaillia-Bac (Lindane)	ug/L		ND	0.06	1.2
76-44-8	Heptachlor	ug/L		ND	0.06	1.2
309-00-2	Aldrin	ug/L		ND	0.06	
1024-57-3	neptachior epoxide	ug/L		ND	0.06	1.2 1.2
959-98-8	Endosulian I	ug/L		ND	0.06	1.2
60-57-1	Dieldrin	ug/L		ND		1.2
72-55-9	4,4'-DDE	ug/L	0.056		0.12	
72-20-8	Endrin	ug/L	0.036	ND	0.12	1.2
33213-65-9	Endosulfan II	ug/L		ND	0.12	1.2
72-54-8	4,4'-DDD	ug/L	0.40	ND	0.12	1.2
1031-07-8	Endosulfan sulfate	ug/L	0.48	NTC.	0.12	1.2
50-29-3	4,4'-DDT	ug/L	0.050	й́D	0.12	1.2
72-43-5	Methoxychlor	ug/L	0.056		0.12	1.2
53494-70-5	Endrin ketone	ug/L		ND ND	0.60	1.2
7421-93-4	Endrin aldehyde	ug/L			0.12	1.2
5103-71-9	alpha Chlordane	ug/L		ND	0.12	1.2
5103-74-2	gamma Chlordane	ug/L		ИD	0.06	1.2
8001-35-2	Toxaphene	ug/L		ND	0.06	1.2
		цу/п		ND	1.2	1.2
SURR	OGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene	15.2	(13	25/21		
	Decachlorobiphenyl	36.0	,	- 154%)		
		36.0	(25	- 140%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810411-01 Client Sample ID: INLET 101598/WATER Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Site/Work ID: PEDERICKTON Matrix: Water

Date Collected: 10/15/98 % Solid: N/A

ICLP Extract Date: N/A Extract Date: 10/22/98 Instrument: HPMS3 Method: 8270C\3510C Run ID: R55194

Analyst: MDC Lab File ID: 14779 Analysis Date: 10/24/98 Time: 16:34 Batch : WG48211

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	15	2.9
111-44-4	Bis (2-Chloroethyl) ether.	ug/L	ND	15	2.9
95-57-8	Bis(2-Chloroethyl)ether. 2-Chlorophenol	ug/L	ND	15	2.9
541-73-1	1.3-D1Chlorobenzene	ug/L	ND	15	2.9
106-46-7	1,4-Dichlorobenzene	ug/L	ND	15	2.9
95-50-1	1,2-Dichlorobenzene	ug/L	ND	15 15 15	2.9
95-48-7	2-Methylphenoi.	ug/L	ND	15	2.9
108-60-1		ug/L	ND	15	2.9
106-44-5	4-Methylphenol	ug/L	ND	15 15 15	2.9
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND ND	15	2.9
67-72-1	Hexachloroethane	ug/L	ND ND	15	2.9
98-95-3	Nitrobenzene	ug/L	ND	15	2.9
78-59-1	Isophorone	ug/L	ND	15 15	2.9
88-75-5	2-Nitrophenol.	ug/1	ND	15	2.9
105-67-9	2.4-Dimethylphenol	ug/L	ND ND	15	2.9
111-91-1	2,4-Dimethylphenol. Bis (2-Chloroethoxy) Methane	ug/L	ND ND	75	2.9
120-83-2	2 4-Bighloropherol	ug/L	ND	15 15	2.9
120-82-1	2,4-Dichlorophenol. 1,2,4-Trichlorobenzene.	ug/L	ND ND	15 15	2.9
91-20-3	Naphthalene	ug/L	ND	15	2.9
106-47-8	4-Chloroaniline	ug/L	ND ND	15	2.9
87-68-3	Hexachlorobutadiene	ug/L	<u></u>	15 15	2.9
59-50-7	A Chloro 2 methylmbonel	ug/L	ND	75	2.9
91-57-6	4-Chloro-3-methylphenol	ug/L	ND	15	2.9
77-47-4	2-Methylnaphthalene	ug/L	ND	15	2.9
88-06-2	Hexachlorocyclopentadiene 2,4,6-Trichlorophenol.	ug/L	MD .	15 15	2.9
	2,4,6-Trichlorophenol	ug/L	ND	72	2.9
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	73	2.9
91-58-7	2-Chloronaphthalene	ug/L	ND	15 73	2.9
88-74-4	2-Nitroaniline	ug/L	ND	73	2.9
131-11-3	Dimethylphthalate	ug/L	ND	15	2.9
208-96-8	Acenaphthylene	ug/L	ND	15	2.9
606-20-2	2,6-Dinitrotoluene	ug/L	ND	15	2.9
99-09-2	3-Nitroaniline	ug/L	ND	73	2.9
83-32-9	Acenaphthene	uq/L	ND	15	2.9
51-28-5	2,4-Dinitrophenol	ug/L	ND	73	2.9
100-02-7	4-Nitrophenol	ug/L	ND	73	2.9
132-64 - 9	Dibenzofuran	ug/L	ND	15	2.9
121-14-2	2,4-Dinitrotoluene	ug/L	ND	15 15	2.9
84-66-2	Diethylphthalate	uq/L	ND	15	2.9
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	15	2.9

L = Reporting Limit

1 9

KEMRON Environm tal Services 109 Starl Park Marietta, Ohio 45750 Phone: (740) 373-4071

Versar, Inc.

9200 Rumsey Road

Columbia, MD 21045-1934

Attention: William Burton

Login #: L9810411 Report Date: 11/03/98 Work ID: PEDERICKTON

Date Received: 10/16/98

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9810411-01	INLET 101598/WATER	L9810411-02	INLET 101598/SEDIMENT

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

David L. Bumgarner



KEMRON ENVIRONMENTAL SERVICES

gin #L9810411 vember 3, 1998 02:49 pm

Lab Sample ID: L9810411-01 .ient Sample ID: INLET 101598/WATER Site/Work ID: PEDERICKTON

Matrix: Water Collected: 10/15/98 0915 COC Info: N/A

lalyte	Units	Result Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
vanide, Total	mg/L	0.024	0.01	1	N/A	JWR	10/21/98	09:00 9010B\9014

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810411-01 Client Sample ID: INLET 101598/WATER Site/Work ID: PEDERICKTON

SLP Extract Date: N/A
 Extract Date: 10/21/98
Analysis Date: 10/22/98 Time: 20:53

Matrix: Water

Dil. Type: N/A COC Info: N/A

Date Collected: 10/15/98

Instrument: HP10 Analyst: CDB Lab File ID: 068R0101

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8082\3510C Run ID: R54794

Batch: WG48155

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.60 0.60 0.60 0.60 0.60 1.2	1.2 1.2 1.2 1.2 1.2 1.2
SURF	ROGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	16.0 27.7	(13 - 154%) (25 - 140%)		

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^{, =} Reporting Limit

TCLP Extract Date: N/A

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810411-01

Client Sample ID: INLET 101598/WATER

Site/Work ID: PEDERICKTON

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/15/98

% Solid: N/A

Instrument: HPMS3 Analyst: MDC

Method: 8270C\3510C Run ID: R55194

Extract Date: 10/22/98 Analysis Date: 10/24/98 Time: 16:34

Lab File ID: 14779 Batch : WG48211 CAS # Compound Units Result Qualifiers RLDilution 86-73-7 Fluorene.. ug/L 15 2.9 4-Nitroaniline..... ug/L ND 73 2.9

100-01-6 4,6-Dinitro-2-methylphenol. ug/L N-Nitrosodiphenylamine. ug/L 534-52-1 ND 73 2.9 86-30-6 ND 15 2.9 101-55-3 4-Bromophenyl-phenylether.....ug/L ND 15 2.9 118-74-1 Hexachlorobenzene.....ug/L ND 15 2.9 Pentachlorophenol.....ug/L 87-86-5 ND 73 2.9 85-01-8 Phenanthrene..... ug/L ND 15 2.9 120-12-7 Anthracene..... ND 15 2.9 86-74-8 Carbazole..... uq/L ND 15 2.9 84-74-2 Di-N-Butylphthalate.... ug/L ND 15 2.9 206-44-0 Fluoranthene.....ug/L ND 15 2.9 129-00-0 Pyrene.....ug/L ND 15 2.9 Butylbenzylphthalate...ug/L3,3'-Dichlorobenzidine...ug/L 85-68-7 ND 15 91-94-1 29 ND 2.9 Benzo(a) anthracene..... ug/L 56-55-3 15 ND 2.9 218-01-9 Chrysene..... ug/L ND 15 2.9 bis (2-Ethylhexyl) phthalate ug/L
Di-n-octylphthalate ug/L
Benzo (b) fluoranthene ug/L 117-81-7 ND 15 2.9 117-84-0 ND 15 2.9 205-99-2 ND 15 2.9 207-08-9 Benzo(k) fluoranthene..... ug/L ND 15 2.9 50-32-8 Benzo(a) pyrene..... ug/L ND 2.9 15 Indeno (1, 2, 3-cd) pyrene ug/L Dibenzo (a, h) Anthracene ug/L 193-39-5 ND 15 2.9 53-70-3 ND. 15 2.9 Benzo (g, h, i) Perylene..... ug/L 191-24-2 ND 2.9

SURROGATES- In Percent Recovery:		
2-Fluorophenol	10.5 *SMI	(21 - 100%)
Pnenol-d5	10.0 SMI	(10 - 94%)
Nitrobenzene-d5	13.0 *SMI	(35 - 114%)
2-Fluorobiphenvl	3.80 *SMI	(43 - 116%)
4,4,6-Tripromophenol.	3.70 *SMI	(10 - 123%)
p-Terphenyl-d14	2.90 *SMI	(33 - 141%)

KEMRON ENVIRONMENTAL SERVICES

gin #L9810411 vember 3, 1998 02:49 pm

Product: 826-TCL - TCL Volatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9810411-01

lient Sample ID: INLET 101598/WATER Site/Work ID: PEDERICKTON Matrix: Water % Solid: N/A Date Collected: 10/15/98

Method: 8260B Instrument: HPMS6

LP Extract Date: N/A Extract Date: N/A Analysis Date: 10/28/98 Time: 20:18 Analyst: CMS Lab File ID: 6VE11054 Run ID: R55412 Batch: WG48541

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L	ND	10	1
74-83-9	Bromomethane	ug/L	ND	10	1
75-01-4	Vinyl chloride	ug/L	ND	10	1
75-00-3	Chloroethane	ug/L	ND	10	1
75-09-2	Methylene chloride	ug/L	ND	5.0	1
67-64-1	Acetone	ug/L	ND	10	, 1
75-15-0	Carbon disulfide	ug/L	ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	1
67-66-3	Chloroform	ug/L	ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	1
78-93-3	2-Butanone	ug/L	ND	10	1
71-55-6	1,1,1-Trichloroethane	ug/L	ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	1
75-27-4	Bromodichloromethane	ug/L	ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L	ND	5.0	1
0061-01-5	cis-1,3-Dichloropropene	ug/L	ND	5.0	1
79-01-6	Trichloroethene	ug/L	ND	5.0	1
124-48-1	Dibromochloromethane	ug/L	ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L	ND	5.0	‡
71-43-2	Benzene	ug/L	ND	5.0	1
0061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	‡
75-25-2	Bromoform	ug/L	ND	5.0	<u> </u>
108-10-1	4-Methyl-2-pentanone	ug/L	ND ND	10	<u>.</u>
591-78-6	2-Hexanone	ug/L	ND	10	÷
127-18-4	Tetrachloroethene	ug/L	ND	5.0	± -
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	<u>+</u>
108-88-3	Toluene	ug/L	ND	5.0	1
108-90-7	Chlorobenzene	ug/L	ND	5.0	± •
100-41-4	Ethyl benzene	ug/L	ND	5.0	<u>.</u>
100-42-5	Styrene	ug/L	ND	5.0	<u> </u>
1330-20-7	Xylenes, Total	ug/L	ND	5.0	-
	•				
SURR	OGATES- In Percent Recovery:	00.0	(86 - 118%)		
	Dibromofluoromethane	89.8	(80 - 120%)		
	1,2-Dichloroethane-d4	98.6	(88 - 120%)		
	Toluene-d8	94.2	(86 - 115%)		
	p-Bromofluorobenzene	96.4	(90 - 1134)		

⁻ Reporting Limit

Login #L98104 November 3, 1998 02:49 pm

KEMRON ENVIRONM AL SERVICES

Lab Sample ID: L9810411-02 Client Sample ID: INLET 101598/SEDIMENT Site/Work ID: PEDERICKTON

Matrix: Soil Collected: 10/15/98 0915

% Solid: 26 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	26		1.0	1	N/A	DKM	10/27/98	14:20	D2216-90

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810411-02 Client Sample ID: INLET 101598/SEDIMENT Site/Work ID: PEDERICKTON

Matrix: Soil

COC Info: N/A Date Collected: 10/15/98

Dil. Type: N/A

Sample Weight: N/A Extract Volume: N/A

ICLP Extract Date: N/A
Extract Date: N/A

Analysis Date: 10/26/98 Time: 16:43

Instrument: HPMS6

Analyst: CMS Lab File ID: 6VE10981

Method: 8260B Run ID: R55205

% Solid: 26

Batch: WG48389

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
74-87-3	Chloromethane	uq/kq	ND			
74-83-9	Bromomernane	110 / Va	ND	38	÷	
75-01-4	VINVI Chioride	ug/kg	ND	38	±	
75-00-3	Chioroethane	1107/1607	ND ND	38 38	÷	
75-09-2	Methylene chloride	ug/kg	ND		<u></u>	
67-64-1	ACETORE	ug/kg	76	19	1	
75-15-0	Carpon disulfide	ug/kg	ND	38	÷	
75-35-4	1,1-Dichloroethene	ug/kg	ND	19	<u> </u>	
75-34-3	1,1-Dichioroethane	ug/kg	ND ND	19	<u> </u>	
540-59-0	1,2-Dichloroethene (Total)	ug/kg	ND ND	19	÷	
67-66-3	Chloroform	ug/kg	ND	19	Ţ	
107-06-2	1,2-Dichloroethane	ug/kg	ND	19	Ţ	
78-93-3	2-Butanone	110 / ko	ND ND	19	<u>.</u>	
71-55-6	1,1,1-Trichloroethane	ug/kg	ND	38	<u>.</u>	
56-23-5	Carbon tetrachloride	ug/kg		19	<u> </u>	
75-27-4	Bromodichloromethane	ug/kg	ND ND	19	Ť	
78-87-5	1,2-Dichloropropane.	ug/kg		19	<u> </u>	
10061-01-5	cis-1,3-Dichloropropene	ug/kg	ND	19	1	
79-01-6	Trichloroethene	ug/kg	ND	19	1	•
124-48-1	Dibromochloromethane	ug/kg	ND	19	1	
79-00-5	1,1,2-Trichloroethane	ug/kg	ND	19	1	
71-43-2	Benzene		ND	19	1	
10061-02-6	trans-1,3-Dichloropropene	ug/kg	ND	19	1	
75-25-2	Bromoform		ND	19	1	
- 73 23-2		ug/kg	ND	19	1	

L - Reporting Limit

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810411-02 Client Sample ID: INLET 101598/SEDIMENT Site/Work ID: PEDERICKTON Matrix: Soil Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/15/98 % Solid: 26

CLP Extract Date: N/A Instrument: HPMS6 Method: 8260B

Extract Date: N/A
Analysis Date: 10/26/98 Time: 16:43 Analyst: CMS Lab File ID: 6VE10981 Run ID: R55205 Batch : WG48389

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
108-10-1	4-Methyl-2-pentanone	ug/kg		ND	38	1
5 91-78- 6	2-Hexanone	uar/ka	•	ND	38	1
127-18-4	Tetrachloroethene	ug/kg		ND	19	i
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg		ND	19	1
108-88-3	Toluene	ug/kg		ND	19	1
108-90-7	Chlorobenzene	ug/kg		ND	19	1
100-41-4	Ethyl benzene	ug/kg		ND	19	1
100-42-5	Styrene	ug/kg		ND	19	1
1330-20-7	Xylenes, Total	ug/kg		ND	19	1
SURR	ROGATES- In Percent Recovery:					
	Dibromofluoromethane	50.3	+ (80 - 120%)		
	1,2-Dichloroethane-d4	52.6	* {	80 - 120%)		
	Toluene-d8	47.0	t (81 - 117%)		
	p-Bromofluorobenzene	36.6	k {	74 - 121%)		

^{. =} Reporting Limit

Order #: 98-10-411 November 3, 1998 02:49 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48068	R54908	L9810411-01	Water	Organochlorine Pesticides	8081A\3510C	ECL	15-OCT-1998	25-OCT-1998	· · · · · · · · · · · · · · · · · · ·	Extraction
WG48069	R54794	L9810411-01	Water	PCB's (Water)	8082\3510C	CDB	15-OCT-1998	22-OCT-1998	20:53	Extraction
WG48090	R54652	L9810411-01	Water	Cyanide, Total	9010B\9014	JWR	15-OCT-1998	21-OCT-1998	09:00	Conventionals
WG48124	R55194	L9810411-01	Water	TCL Semivolatiles	8270C\3510C	MDC	15-OCT-1998	24-OCT-1998	16:34	Extraction
WG48155	R54794	L9810411-01	Water	PCB's (Water)	8082\3510C	CDB	15-0CT-1998	22-OCT-1998	20:53	Semivolatile - GC
WG48211	R55194	L9810411-01	Water	TCL Semivolatiles	8270C\3510C	MDC	15-OCT-1998	24-OCT-1998	16:34	Semivolatile - GC/MS
WG48292	R54908	L9810411-01	Water	Organochlorine Pesticides	8081A\3510C	ECL	15-OCT-1998	25-OCT-1998		Semivolatile - GC
WG48389	R55205	L9810411-02	Soil	TCL Volatiles	8260B	CMS	15-OCT-1998	26-0CT-1998	16:43	Volatile - GC/MS
WG48432	R55083	L9810411-02	Soil	Percent Solids	D2216-90	DKM	15-OCT-1998	27-0CT-1998	14:20	Conventionals
WG48541	R55412	L9810411-01	Water	TCL Volatiles	8260B	CMS	15-OCT-1998	28-OCT-1998	20:18	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

BAD - - Becky A. Diehl CEB - - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - Crystal M. Stevens CRC - - Carla R. Cochran DIH - - Deanna I. Hesson DKM - - Dewey K. Miller DLN - - Deanna L. Norton DLP - Dorothy L. Payne ECL - - Eric C. Lawson FEH - - Fay E. Harmon HV - - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH - - Ji Y. Hu KHA - - Kim H. Archer KMS - - Kevin M. Stutler

KRA - - Kathy R. Albertson MDA - - Mike D. Albertson

ALC - Ann L. Clark

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - - Michael L. Schimmel MMB - - Maren M. Beery RDC - Rebecca D. Cutlip RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - Robert E. Kyer RSS - - Regina S. Simmons RWC - - Rodney W. Campbell SJK - - Sindy J. Kinney SJM - - Shawn J. Marshall SLP - - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TJW - - Thomas J. Ware TRS - - Todd R. Stack VC - - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	ifier Description	Qualifier	Description
(A) (B) (C) + < > B C	See the report narrative See the report narrative See the report narrative Correlation coefficient for the MSA is less than 0.995 Less than Greater than Present in the method blank Confirmed by GC/MS Surrogate or spike compound out of range	N NA ND NF NFL NI NR NS P	Tentatively Identified Compound (TIC) Not applicable Not detected at or above the reporting limit (RL) Not found No free liquid Non-ignitable Analyte is not required to be analyzed Not spiked Concentration > 25% difference between the two GC
CG D DL E F FL I J L	Confluent growth The analyte was quantified at a secondary dilution factor Surrogate or spike was diluted out Estimated concentration due to sample matrix interference Present below nominal reporting limit (AFCEE only) Free liquid Semiquantitative result, out of instrument calibration range Present below nominal reporting limit Sample reporting limits elevated due to matrix interference Duplicate injection precision not met	QNS R RA RE S SMI SP	columns Quantity not sufficient to perform analysis Analyte exceeds regulatory limit Reanalysis confirms reported results Reanalysis confirms sample matrix interference Analyzed by method of standard addition Sample matrix interference on surrogate Reported results are for spike compounds only Too numerous to count Analyzed for but not detected Post-digestion spike for furnace AA out of control limits Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

ORGANIC QA/QC

KETIRON ENVIRONMENTAL SERVICES

anica: il

Workgroup #: WG48389

Method: 8260A

Run Date: 10/26/98 Instrument ID: HPMS_6 LCS2 FLNM: · NA SMPL Num: 10-465-07

LCS DF: SMPL DF:

Matrix: Soil Units: ug/kg BLK FLNM: 68K10970

SMPL FLNM: 6VE10982 MS FLNM: 6VE10993.D

MS DF: MSD DF: 1

BLK2 FLNM: NA LCS FLNM: 6QC10991.D

MSD FLNM: 6VE10994.D

	1				CC	NCENTRA	TION, PF	B			<u></u>			PERCE	ENT REC	OVERY			PERCE	NT RP
						LCS Spike	,			MS Spike			LCS	LCS			MS	MS	MSi	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	Ms	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	96	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	16.1	NA	20.0	ND	16.6	17.2	20.0	80.5	· NA	46,0	152.0	83.2	୍ 86.1	46.0	152.D	3.5	20.0
chloromethane	10.0	ND	ND	20.9	NA	20.0	ND	21.5	21.2	20.0	104,4	NA	64.0	140.0	107.5	106.1	64.0	140.0	1.3	20.0
vinyl chloride	10.0	ND	ND	21.3	NA .	20,0	ND	21.8	20.7	20.0	106.5	NA :	70.0	137.0	109,0	103.7	70.0	137.0	5,0°	20.0
bromomethane	10.0	ND	ND	26.1	NA	20.0	ND	26.9	24.9	20.0	130.7	NA	62.0	147.0	134.5	124.5	62.0	147.0	7.7	20.0
chloroethane	10,0	ND	ND	18.9	NA	20.0	ND	20.9	19,9	20.0	94.7	NA	69.0	136.0	104.6	99.5	69,0	136.0	5.0	20.0
trichlorofluoromethane	10.0	ND	ND	19,9	NA	20.0	ND	20.3	20.2	20.0	99.6	NA	70.0	134.0	101.4	101.0	70.0	134.0	0.3	20.0
freon 113	10.0	ND	ND	NA .	NA .	20.0	ND.	NA .	NA .	20.0	NA	NA	NA:	NA	N.A.	NA	NA :	NA.	. NA	20.0
ecetone	100.0	ND	ND	23.5	NA	20.0	4.8	39.9	65.5	20.0	117.5	NA	14.0	171.0	175.6	303.7	14,0	171.0	48.6	20.0
1,1-dichloroethene	5.0	ND	ND	20.3	NA	20.D	ND	20.4	21.3	20.0	101.7	NA	70.0	140.0	102.2	106.4	70,0	140.0	34.1	20.0
iodomethane	10.0	ND	ND	15.5	NA	20.0	ND	14.1	15.6	20.0	77.7	NA	50.0	150.0	70.6	77.9	50.0	150.0	9.8	20.0
methylene chloride	5.0	ND	ND	22.8	NA	20.0	ON	21.1	22.0	20.0	114.0	NA	57.0	146,0	105.3	110.0	57.0	146.0	4.4	20,0
carbon disulfide	5.0	ND	ND	21.5	NA	20.0	ND	19.5	20.2	20.0	107.3	NA	69.0	125.0	97.3	101.1	69.0	125.0	3.8	20.0
acrylonitrile	100.0	ND	ND	NA .	NA .	20.0	ND	NA.	NA X	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	20,9	21.3	20.0	108.9	NA	75.0	141.0	104.4	106.5	75.0	141.0	2.0	20.0
vinyl acetate	10.0	ND	NO	21.9	NA ···	20.0	ND	0.0	0.0	20.0	109.6	NA .	O	132.0	0.0	0.0	D	132.0	#DIV/G!	20.0
1,1-dichloroethane	5.0	ND	ND	23.9	NA	20.0	ND	21.7	22.0	20.0	119.7	NA	79.0	125.0	108.3	110.0	79.0	125.0	1.6	20.0
2-butanone	100.0	ND	ND	19.0	NA .	20.0	ND	18.7	29.6	20.0	94.9	NA.	28.0	173.0	93.6	147.8	28.0	173.0	44.5)	20.0
2,2-dichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	20.5	20.9	20.0	109.0	NA	69.0	128.0	102.6	104.7	69.0	128.0	2.0	20.0
cis-1,2-dichlorpethene	5.0	ND	ND	21.2	NA	20,0	ND ·	19.4	19.9	20.0	106.0	NA .	75.0	125.0	97.0	99.3	75.0	125.0	2.3	20.0
chloroform	5.0	ND	ND	22.8	NA	20.0	ND	21.7	21.8	20.0	114.0	NA	78.0	124.0	108.3	109.0	78.0	124.0	0.7	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND= Not Delected NA= Not Applicable

BLK= Method Blank

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48389

Matrix:

Method: 8260A

Run Date: 10/26/98

LCS2 FLNM: NA

LCS DF:

8260A Instrument IC Soil BLK FLNN

Instrument ID: HPMS_6 SMPL Num: 10-465-07
BLK FLNM: 6BK10970 SMPL FLNM: 6VE10982

SMPL DF: 1

Units: ug/kg

BLK2 FLNM: NA MS FLNM: 6VE10993.D

MSD DF:

LCS FLNM: 6QC10991.D MSD FLNM: 6VE10994.D

				·	C	ONCENTRA	TION, PP	В			<u> </u>			PERCE	NT REC	OVERY			PERCE	NT RPI
		<u> </u>				LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
•	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.7	NA	20.0	ND	19.3	20.2	20.0	103.5	NA	78.0	125.0	96.4	101.2	78.0	125.0	4.8	20.0
1,1,1-trichloroethane	5.0	ND	ND."	21.6	NA .	20.0	ND	21.2	21.4	20.0	108.1	NA	77.0	124.0	106.0	107.1	77.0	124.0	74.1 .2	20.0
1,1-dichloropropene	5.0	ND	ND	22.5	NA	20.0	ND	20.7	21.0	20.0	112,6	NA	85.0	132.0	103.6	105.2	85.0	132.0	1.5	20.0
carbon tetrachloride	5.0	. ND	ND	22.2	NA .	20.0	ND	21.5	21.0	20.0	111.0	NA.	77.0	126.0	107.3	105.2	77.0	126.0	2.0	20.0
1,2-dichloroethane	5.0	ND	ND	23.8	NA	20.0	ND	22.1	23.0	20.0	118.8	NA	75.0	126.0	110.4	114.8	75.0	126.0	3.9	20.0
benzene	5.0	ND	ND	22,3	NA .	20.0	ND	21.1	21,0	20.0	111,5	NA	81.0	122.0	105.7	105.0	81.0	122.0	0.7	20.0
trichloroethene	5.0	ND	ND	20.3	NA	20.0	ND	18.5	18.7	20.0	101.7	NA	81.0	123.0	92.4	93.3	81.0	123.0	1.0	20.0
1.2-dichloropropane	5.0	ND	ND	22.5	NA .	20.0	ND	20.7	21.4	20.0	112,7	NA	79.0	125.0	103.6	8,801	79.0	125,0	3.1	20.0
bromodichloromethane	5.0	ND	ND	22.5	NA	20.0	ND	20.4	20.5	20.0	112.4	NA	81.0	123.0	101.9	102.6	81.0	123.0	0.7	20.0
dibromomethane	5.0	NO	ND	21.4	NA	20.0	ND	19.6	21.5	20.0	107.1	NA	80.0	126.0	97.8	107.3	80.0	126.0	93	20.0
2-chloroethylvinyl-ether	5.0	ND	ND	13.8	NA	20.0	ND	11.9	14.4	20.0	69.2	NA	50.0	151.0	59.6	71.9	50.0	151.0	18.7	20.0
4-methyl-2-pentanone	10.0	ND	ND	17.4	NA	20.0	ND	16.4	21.8	20.0	87.1	NA .	38.0	162.Q	81.9	109.1	38.0	162.0	28.5	20.0
cis-1,3-dichloropropene	5.0	ND	МD	18.9	NA	20.0	ND	15.5	16.0	20.0	94.7	NA	81.0	124.0	77.4	80.2	81.0	124.0	3.6	20.0
toluene	5.0	ND	ND	23.3	NA.	20.0	ND	20.7	20,3	20.0	116.3	NA	80.0	124.0	103.4	101.6	80.0	124.0	1.8	20.0
rans-1,3-dichloropropene		ND	ND	21.8	NA	20.0	ND	16.8	17.7	20.0	108.8	NA	80.0	122.0	84.2	88.6	80.0	122.0	5.2	20.0
1,1,2-trichloroethane	5.0	ND	ND	22.1	NA .	20.0	ND	19.8	21,5	20.0	110,7	NA	79.0	123.0	98.9	107.4	79.0	123.0	8.3	20.0
ravar (a fullisación de la varia discioner de la	10.0	ND	ND	17.1	NA	20.0	ND	14.9	21.2	20.0	85.6	NA	31.0	149.0	74.3	105.8	31.0	149.0	35.0	20.0
2-hexanone	Nesdaya (1989)	784.50	vas foreste	4509.1.109.5	ยสาราก ค.ศ. วิจจัดสส	onenverkisches	ND	19.6	21.3	20.0	111.8	NA	79.0	123.0	97.9	106.6	79,0	123.0	8,5	20.0
1,3-dichloropropane	· 5.0	ND	ND	22.4	NA	20.0	Object 1 No. 10	rassana in ra		teri versione de la	20120,035	1 (16) F (17) 5 ·	80.0	122.0	78.0	76.6	80.0	122.0	1.5	20.0
letrachioroethene	5.0	ND	ND	21.1	NA NA	20.0	3.1	18,7 ~~:::::::::::::::::::::::::::::::::::	18.4	20.0	105.5	NA 	4.50	S. 195 Jan 195	03/4/3/3/4901	95.6	B1.0	122.0	4.7	20.
dibromochloromethane	5.0	ND	ND.	21.4	NA	20.0	ND	18.2	19.1	20.0	106.8	NA	81.0	122.0	91.2	- 80.0	01.0	122.0	<u> </u>	

Notes and Definitions:

RDL= Reporting Detection Limit

ND≕ Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2st Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

KEMRON-ENVIRONMENTAL SERVICES - OVL **VOLATILE QUALITY CONTROL SUMMARY**

6102698A.XLS

Workgroup #: WG48389

8260A

Run Date: 10/26/98 Instrument ID: HPMS_6 LCS2 FLNM:

LCS DF: 1

Method: Matrix:

Soil

BLK FLNM: 68K10970

SMPL Num: 10-465-07 SMPL FLNM: 6VE10982 SMPL DF: 1 MS DF: 1

Units: ug/kg

BLK2 FLNM: NA MS FLNM: 6VE10993.D

MSD DF: 1

D.

L	CS	FLNM:	6QC10991.D	MSD	FLNM:	6VE10994.0

•		<u> </u>			· CC	NCENTRA	ATION, PE	ъ			<u> </u>			PERCE	NT REC	OVERY			PERC	ENT RP
						LCS Spike	Ð			MS Spike			LCS	LCS			MS	MS	MS	RPD
	ROL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	96	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.7	NA	20.0	ND	17.9	19,8	20.0	103.4	NA	79.0	125.0	89.5	99.0	79.0	125.0	10.0	20.0
chlorobenzene	5.0	ND	ND	21.9	NA .	20.0	2.3	16.7	16.5	20.0	109.7	NA.	82.0	124.0	72.4	71,2	82.0	124.0	1.4 %	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.7	NA	20.0	ND	18.5	18.9	20.0	108.5	NA	80.0	124.0	92.7	94.6	80.0	124.0	2.0	20.0
ethylbenzene	5.0	ND	ND	22,2	NA	20.0	ND	18.1 &	18,1	20.0	111,2	NA	78.0	127.0	90,3	90.4	78.0	127.0	0.1	20.0
m+p-xylene	5.0	ND	ND	45.1	NA	40.0	ND	35.0	34.6	40.0	112.8	NA	81.0	124.0	87.5	86.4	81.0	124.0	1.3	20.0
o-xylene	5.0	ND	ND	19.0	NA	20.0	ND	15.1	14.7	20.0	94.9	NA	33.0	124.0	75.5	73.4	83.0	124.0	2.9	20.0
slyrene	5.0	ND	ND	19.8	NA	20.0	ND	12.5	12.4	20.0	98.1	NA NA	30.0	122.0	62.5	62.0	80.0	122.0	0.8	20.0
bromoform	5.0	ND	ND	17.4	NA .	20.0	ND	13.8	15.1	20.0	86.8	NA	67.0	134.0	68.9	75.3	67.0	134.0	8.9	20.0
isopropylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	15.1	15.2	20.0	97.2	NA	82.0	124.0	75.5	75.9	82.0	124.0	0.6	20.0
1,1,2,2-letrachlorcethane	5,0	ND	ND	21,0	NA ⊹	20.0	ND	19.1	18.6	20.0	105.0	NA .	71.0	136.0	95.5	93.0	71.0	136 0	2.7	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.4	NA	20.0	ND	19.1	22.4	20.0	106.8	NA .	70.0	139.0	95.5	111.8	70.0	139.0	15.7	20.0
ans-1,4-dichloro-2-butene	5.0	ND	ND	NA .	NA	20.0	ND	NA	NA .	20.0	NA	NA	NA .	NA .	NA	NA	NA	NA	NA	NA
propyl-benzene	5.0	ND	ND	21.7	NA	20.0	ND	15.7	16.0	20.0	108.6	NA	79.0	124.0	78.4	80.2	79.0	124.0	2.3	20.0
bromobenzene	5.0	ND	ND	20.6	NA .	20.0	ND	13.1	13.5	20.0	103.2	NA.	80.0	122.0	65.5	67.7	80.0	122.0	3.2	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	22.1	NA	20.0	ND	15.5	15.7	20.0	110.6	NA	82.0	123.0	77.6	78.6	82.0	123.0	1.3	20.0
2-chlorotoluene	5.0	ND	ND	22.7	NA	20.0	ND	15.4	15.3	20.0	113.6	NA	77.0	126.0	77.0	76.3	77.0	126.0	0.9	20.0
4-chlorotoluene	5.0	ND	ND	21.9	NA	20.0	ND	13.1	13.6	20.0	109.5	NA	80.0	647777.6 1 24.0	65.5	67.9	80.0	124.0	ಾಳ್.ದಎನೀ 3.5	20.0
tert-bulyl-benzene	5.0	ND	ND	20.3	NA C	20.0	ND	14.7	15,3	20.0	101.4	NA O	78.0	122.0	73.4	76.5	78.0	122.0	41	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.8	NA.	20.0	ND	14.5	14.7	20.0	109.0	NA	: 1.7178) 83.0	123.0	72.5	73.3	83.0	123.0	1,0	20.0
sec-bulyl-benzene	5.0	ND	ND	21.5	NA NA	20.0	ND	14.9	15.5	20.0	107.6	NA .	80.0	124.0	74.6	77.6	80.0	124.0	3.9	20.0

Notes and Definitions:

RDL≖ Reporting Detection Limit

ND= Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2^{ss} Second Method Blank

LCS= Laboratory Control Sample

LCS2^{ss} Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Metrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPO= Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48389

Run Date: 10/26/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A

8260A In

Instrument ID: HPMS_6

SMPL Num: 10-465-07

SMPL DF:

Matrix: Soil

BLK FLNM: 68K10970

SMPL FLNM: 6VE10982

MS DF:

Units: ug/kg

a BLK2 FLNM:

MS FLNM: 6VE10993.D

MSD DF:

Jniks: ug/kg

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.CS	FLNM:	6QC10991 D	MSD FLNM:	6VE10994.D

					C	ONCENTRA	ATION, PP	В	•					PERCE	NT REC	OVERY			PERCE	NT RPD
					•	LCS Spik	8			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.8	NA	20.0	ND	15.1	14,1	20.0	104.1	NA	77.0	124.0	75.6	70.7	77.0	124.0	6.8	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.9	NA	20.0	ND	10.8	10.9	20.0	104,4	NA	82.0	120.0	54.2	54:3	82.0	120.0	0:1	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	10.5	10.6	20.0	102.9	NA	81.0	121.0	52.5	53.2	81.0	121.0	1.3	20,0
n-butyl-benzene	5.0	ND	ND	22.7	NA	20.0	ON	13.3	13.3	20.0	113.4	NA	81,0	125.0	66,3	66.7	81.0	125.0	0.7	20.0
1,2-dichlorobenzene	5.0	ND	ND	21,1	NA	20.0	ND	10.7	11,0	20.0	105.5	NA	84.0	122.0	53.7	55.0	84.0	122.0	2.3	20.0
,2-dibromo-3-chloropropan	5.0	ND	ND	15.8	NA	20.0	ND :	11.6	15.1	20.0	79,2	NA .	55.0	155.0	58.0	75.3	55.0	155,0	26.0	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.7	NA	20.0	ND	5.8	6.0	20.0	98.7	NA	78.0	124.0	28.9	29.9	78.0	124.0	3.2	20.0
hexachlorobutadjene	5.0	ND	ND	21.8	NA	20.0	ND .	10.8	11.4	20.0	108.9	NA .	73.0	127.0	54.2	56.8	73.0	127.0	4.7	20.0
napthalens	10.0	ND	ND	17.0	NA	20.0	ND	5.1	6.0	20.0	84.8	NA	56.0	152.0	25.5	30,0	56.0	152.0	18,4	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	5.9	6.4	20.0	101.0	NA	76.0	128.0	29.6	32.0	76.0	128.0	7.8	20.0

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2ª Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL≖ Upper Control Limit

RPD= Relative Percent Difference

ND= Not Detected

NA= Not Applicable

RDL= Reporting Detection Limit

BLK= Method Blank

ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48541 Method:

8260A

Run Date: 10/28/98 Instrument ID: HPMS_6 LCS2 FLNM: SMPL Num: 10-367-01

LCS DF: 1 SMPL DF:

Matrix; Water Units: ug/L

BLK FLNM: 6BK11038 BLK2 FLNM: NA

SMPL FLNM: 6BF11041 MS FLNM: 6BF11042.D MS DF:

LCS FLNM: 6QC11039.D

MSD FLNM; 6BF11043.D

MSD DF:

					C	DICENTR	ATION, PE	B						PERCE	NT REC	OVERY			PERCI	ENT RE
•	ł	ł				LCS Spik	e			MS Spike			LCS	LCS			MS	MS	MS	RPC
· · · · · · · · · · · · · · · · · · ·	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCI
Target Analytes	ug/L	υg/L,	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	: %
dichlorodifluoromethane	10.0	ND	, ND	15.2	NA .	20.0	ND	4.9	9.4	20.0	75.9	NA	38.0	148.0	24.4	47,1	60.0	140.0	63.7	20.0
chloromethane	10.0	ND	ND	14,5	, NA	20.0	ND	9,7	11.7	20.0	72.7	NA	56.0	132.0	48.5	58.7	D	273.0	19,1	20.0
vinyl chloride	10,0	ND	ND	14.8	NA	20.0	ND	7.6	10.9	20.0	74.1	NA -	68.0	125.0	38.2	54.4	D	251.0	34.9	20.0
bromomethane	10.0	ND	ND	20.1	NA	20.0	ND	14.6	16,4	20.0	100.5	NA	55.0	138.0	72.9	82.2	D	242.0	12.0	20.0
chlorpethane	10.0	ND)	ND	15,2	NA :	20.0	ND .	9.4	10.8	20.0	75.8	NA.	70.0	128.0	47.2	54.2	14.0	230.0	13.9	20.0
trichlorofluoromethane	10.0	ND	ND	18.6	NA	20.0	ND	7.9	12.3	20.0	92.8	NA.	70.0	127.0	39.5	61.6	17.0	181.0	43.8	20.0
freon 113	NTC	ND	ND	NA	NA .	20.0	ND	NA	ŇA	20.0	NA	NA	. NA	NA	NA	NA	70.0	130.0	NA	20.0
acelone	100.0	ND	ND	20.0	NA	20.0	ND	19.5	20.4	20.0	99.8	NA	44.0	114.0	97.7	101.9	70.0	130.0	4.3	20.0
1,1-dichloroethene	5.0	⊗ ND⊗	ND	21.1	NA :	20.0	ND (10.6	14.7	20.0	105.5	NA	69.0	144.0	52.9	73.6	D	234.0	32.8	20.0
iodomethane	NTC	ND	ND	22.4	NA	20.0	ND	16.6	20.2	20.0	111.9	NA.	NA	NA	83.0	100.9	70.0	130.0	19.4	20.0
methylene chloride	5.0	ND	ND	21.5	NA	20.0	ND.	19.6	20.0	20.0	107.4	NA	71.0	128.0	98.0	100.2	D	221.0	2.2	20.0
carbon disulfide	5.0	ND	ND	19.9	NA	20.0	ND	9.8	14.7	20.0	99.5	NA	67.0	136.0	49.1	73.3	70.0	130.0	39.5	20.0
acrylonitrile	NTC	ND	ND.⊗	NA	NA:	20.0	ND	NA:	NA	20.0	NA .	NA	NA	NA.	NA	NA	70.0	130.0	NA	20.0
rans-1,2-dichloroethena	5.0	ND	ND	23.0	NA	20.0	ND	15.5	17.8	20.0	115.2	NA	85.0	133.0	77.3	88.9	54.0	156.0	14.0	20.0
vinyi acetate	10.0	ND	ND	36.9	NA .	20.0	ND	36.4	38.0	20.0	184.5	NA	9.0	236.0	181.6	190.0	9.0	236.0	4.4	20.0
1,1-dichloroethane	5.0	ND	ND	21.9	NA	20.0	ND	17.6	19.0	20.0	109.4	NA.	82.0	124.0	88.0	95.2	59.0	155.0	7.9	20.0
2-bulanone	100,0	ND	ND	19,9	NA	20.0	ND	18.6	19.4	20.0	99.6	NA	43.0	140.0	93.0	96.9	70.0	130.0	4.2	20.0
2,2-dichloropropane	5.0	ND	ND	24.6	NA	20.0	ND	15.4	18.5	20.0	122.8	NA	77.0	126.0	76.9	92.3	60.0	140.0	18.1	20.0
cis-1,2-dichlorpethene	5.0	ND	ND 🗱	22.0	NA	20.0	ND	18.4	19.3	20.0	109.9	NA	69.0	130.0	91.8	96.3	60.0	140.0	4.8	20.0
chloroform	5.0	ND	ND	21.6	NA	20.0	ND	18.8	19.5	20.0	107.9	NA	83.0	121.0	93.9	97.6	51.0	138.0	3.9	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND≃ Not Detected NA= Not Applicable

BLK= Method Blank

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL^a Upper Control Limit

RPD= Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL. **VOLATILE QUALITY CONTROL SUMMARY**

Workgroup #: WG48541

Method: 8260A

Run Date: 10/28/98

LCS2 FLNM: NA LCS DF:

Matrbc Water Instrument ID: HPMS 6 **BLK FLNM: 68K11038**

SMPL Num: 10-367-01 SMPL FLNM: 6BF11041 SMPL DF: 1 MS DF:

Units: · ua/L BLK2 FLNM: NA MS FLNM: 6BF11042.D

MSD DF:

LCS FLNM: 6QC11039.D MSD FLNM: 68F11043.D

					C	ONCENTRA	ATION, P	28						PERCE	NT REC	OVERY			PERC	ENT RP
•	-					LCS Splk	е			MS Spike			LCS	LCS			MS	MS	MS.	RPD
	RDL	BLK	BLK2	ĹĊŞ	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Targel Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%_
bromochloromethane	5.0	ND	ND	23.0	NA	20.0	ND	21,8	21.9	20,0	114.8	NA	85.0	118.0	108.9	109,7	60.0	140.0	0.7	20.0
1,1,1-trichloroethane	5,0	ND	ND	20.7	NA .	20.0	ND	12.7	15.7	20.0	103.4	NA	74.0	125.0	63.3	78.5	52.0	162.0	21.5	20.0
1,1-dichloropropene	5.0	ND	ND	23.4	NA	20.0	. ND	13.0	17.1	20.0	117.2	NA	85.0	126.0	65.1	85.4	60.0	140.0	27.0	20.0
carbon tetrachloride	5.0	ND.	ND	21.9	NA .	20.0	· DN	12.1:	15.9	. 20.0	109.6	NA	73.0	129.0	.60.3	79.4	70.0	140.0	27.3	20.0
1,2-dichloroethane	5.0	ND	ND	21.0	NA.	20.0	ND	20.9	20.8	20.0	105.1	NA	76.0	123.0	104.4	103.9	49.0	155.0	0.4	20.0
benzen e	5.0	ND	ND	22.6	NA :	20.0	ND	18.0	19,4	20.0	113,0	NA	86.0	118.0	89.8	96.8	37.0	151.0	7.6	20.0
trichioroethene	5.0	ND	ND	19.3	NA	20.0	ND	13,5	15.4	20.0	96.3	NA	82.0	120.0	67.4	76.8	71.0	157.0	13.0	20.0
1,2-dichloropropane	5.0	ND	ND:	21,1	NA :	20.0	ND	19.3	19.8	20.0	105.6	NA .	74.0	126.0	96.5	98.8	D	210.0	2.3	20.0
bromodichloromethane	5.0	ND	ND	22.5	NA	20.0	ND	21.1	21.4	20.0	112.6	NA	74.0	126.0	105.4	107.0	35.0	155.0	1.6	20.0
dibromomethene	5.0	ND	ND	22.4	NA	20.0	ND	22.1	22.3	20.0	111.9	NA.	78.0	125.0	110.4	111.7	60.0	140.0	12	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	20.4	NA	20.0	ND	20.3	20.0	20.0	101.9	NA	68,0	144.0	101.4	100.0	70.0	130.0	1,4	20.0
A-methyl-2-penlanone	10.0	ND	ND	19.1	NA :	20.0	: ND	19.2	19.7	20.0	95.5	NA	79.0	127.0	95.8	98.3	70.0	130.0	2.6	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	20.2	20:5	20.0	107.9	NA	77.0	123.0	101.0	102.6	D	227.0	1.6	20.0
ı toluene	5,0	ND	ND	22.4	NA 1	20.0	ND	18.2	19.5	20.0.	112.0	NA	83.0	119.0	91.2	97.7	47.0	150.0	6.9	20.0
Irans-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	ND	21.5	21.7	20.0	108.1	NA	74.0	124.0	107.6	108.3	17.0	183.0	0.7	20.0
1,1,2-trichlorgethane	5.0	ND	ND	22.2	NA	20.0	. ND	22.5	22.6	20.0	110.9	NA	72.0	119.0	112.6	112.9	52,0	150.0	0.3	20.0
2-haxanone	10.0	ND ND	ND	16.9	NA	20.0	ND	17.4	18.3	20.0	84.3	NA	55.0	114.0	87.1	91.4	70.0	130.0	4.8	20.0
1,3-dichloropropane	5.0	ND	ND	21,5	: NA	20.0	ND	22.0	21.9	20.0	107,7.	NA	73.0	122.0	109.8	109.6	60.0	140.0	0.2	20.0
tetrachloroethene	5.0	ND	ND	21.8	NA	20.0	ND	13.9	16.6	20.0	108.9	NA	82.0	120.0	69.6	83.2	64.0	148.0	17.8	20.0
dibromochloromethane	° 5.0	ND	ND	21.9	NA	20.0	. ND	22.0	22.0	20.0	109.6	NA	72.0	121.0	109.8	110.0	53.0	149.0	0.2	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND= Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

6 6 18

ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

M8260A 6102898W.XLS

Workgroup #: WG48541

Matrix:

Run Date: 10/28/98

LCS2 FLNM:

LCS DF: 1

Method: 8260A

Instrument ID: HPMS_6 **BLK FLNM: 68K11038**

SMPL Num: 10-367-01 SMPL FLNM: 6BF11041 SMPL DF: 1

Units:

Water ug/L

BLK2 FLNM: NA

MS FLNM: 6BF11042.D

MS DF: 1

MSD FLNM; 68F11043.D

MSD DF: 1

LCS FLNM: 6QC11039.0

}					C	ONCENTRA	TION, PE	PB						PERCE	NT REC	OVERY			PERC	ENTR	<u>PD</u>
ſ)					LCS Spike	,			MS Spike	}		LCS	LCS			MS	MS	MS	RP	D
	RDL.	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UC	<u>. </u>
Target Analytes.	ug/L	սց/Լ	ug/L	ug/L	υg/L	υg/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	r %	, i
1,2-dibromoethane	5.0	ND	ND	22.7	NA	20.0	ND	22.9	23.1	20.0	113,7	NA	75.0	121.0	114.5	115.4	60.0	140.0	0.8	20	0
chlorobenzene	5.0	ND	ND	22.4	NA O	20.0	ND	20.0	20.5	20.0	112.1	NA.	83.0	120.0	99.8	102.6	37.0	160,0	2.7	20	oį į
1,1,1,2-letrachtoroethane	5.0	ND	ND	21.7	NA	20.0	ND	20.4	20.7	20.0	108.6	NA	79.0	118.0	102.0	103.4	60.0	140.0	1.4	20	0
sihyibenzene	5.0	ND	ND	18.9	NA	20.0	ND	14.7	16.0	20.0	94.7	y NA	82.0	119.0	73.5	80,1.	37.0	162.0	8.7	20	o l
m+p-xylene	5.0	ND	ND	44.8	NA	40.0	ND	35.9	38.8	40.0	111.9	NA	81.0	121.0	89.8	97,0	60.0	140,0	7.7	20	0
o-xylene	5.0	ND	NO	22.2	NA .	20.0	ND	19.1	20.2	20.0	111,0	: NA	81.0	199.0	95.6	100.8	60.0	140.0	5.2	20	o i
slyrene	5.0	ND	ND	21.8	NA	20,0	ND	20.1	20.4	20.0	109.2	NA	81.0	118.0	100.4	102.2	60.0	140,0	1.8	20	0
bromoform	5.0	ND	ND	19.0	NA	20.0	ND	19.5	19.5	20,0	94.9	: NA	68.0	129.0	97.4	97.3	45.0	169.0	0.1	20	ġ.
Isopropylbenzene	5.0	ND	ND	22.1	NA	20.0	ND	16.0	18.3	20.0	110.7	NA	81.0	121.0	80.1	91,3	60.0	140.0	13,1	20	
1,1,2,2-letrachloroethune	5.0	ND	ND	23.5	NA	20.0	ND	24.1	24.2	20.0	117.6	NA	61.0	137.0	120.3	121.0	46.0	157.0	0.6	20	o,
1,2,3-Irichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	22.4	22.3	20.0	109.0	NA	72.0	130.0	111.9	111.7	60.0	140,0	0.1	20.	•
rans-1,4-dichloro-2-bulene	NTC	ND	ND	3,1	NA	20.0	ND	2.3	2.6	20.0	15.4	, NA	NA :	NA .	11.5	12.8	NA .	NA	10.3	20	o,
propyl-benzene	5.0	ND	ND	21.6	NA	20.0	ND	15.6	17.6	20.0	108.0	NA	69.0	135.0	77,9	88.1	60.0	140.0	12.3	20	. i.
bromobenzene	5.0	ND	ND	21.7	NA .	20,0	ND	20.1	20.4	20.0	108.5	. NA	86.0	118.0	100.3	102.1	60,0	140.0	1.8	20	o!
1,3,5-trimethylbenzene	5.0	ND	ND	21.7	NA.	20.0	ND	16.9	18.4	20.0	108.5	NA	83.0	121.0	84.7	91.9	60.0	140.0	8.2	20	
2-chlorololuene	5.0	ND	ND	21.3	NA .	20.0	ND	17.7	18.5	20.0	106.4	NA	80.0	126.0	88.3	92.7	60.0	140.0	4.8	20	o.
4-chlorotoluene	5.0	ND	ND	21.6	NA	20.0	ND	18.8	19.5	20.0	108.2	NA	80.0	125.0	94.2	97.3	60.0	140.0	3.3	20	
lert-bulyl-benzene	5.0	ND	ND	20.5	NA.	20.0	ND	14.2	16.4	20.0	102.3	NA	79.0	114.0	70.8	82.1	60.0	140.0	14.8	20	o.
1,2,4-trimethylbenzene	5.0	ND	ND	. 29.4 - 21.4	NA	20.0	ND	17.9	18.8	20.0	107.2	NA.	84.0	121.0	89.3	94.1	60.0	140.0	5.2	20	
sec-butyl-benzene	් _{5.0}	ND	ND .	21.4	NA.	20.0	. ND	13,8	16.6	20.0	107.2	NA	81.0	122.0	69.1	83.2	60.0	140.0	18.6	20	. 4

Notes and Definitions:

RDL= Reporting Detection Limit

ND= Not Delected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank-

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL≃ Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

8260

Workgroup #: WG48541

Run Date: 10/28/98

LCS2 FLNM: NA

LCS DF:

Method: 8260A

Instrument ID: HPMS_6

SMPL Num: 10-367-01

SMPL DF:

Matrix: Water Units: ug/L

BLK FLNM: 6BK11038 BLK2 FLNM: NA

SMPL FLNM: 68F11041 MS FLNM: 68F11042.D MS DF: MSD DF:

LCS FLNM: 6QC11039.D MSD FLNM: 6BF11043.D

		<u> </u>			C	ONCENTRA	TION, PF	В						PERCE	NT REC	OVERY	,		PERCI	ENT RP
·		ľ				LCS Spike	;			MS Spike			LCS	LCS			MS	MS	MS	i RPO
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/l.	ug/L	ug/L	ug/L	ug/L	vg/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-totuene	5.0	ND	ND	21.2	NA	20.0	ND	14.6	16.9	20.0	106.0	NA	80.0	119.0	72.9	84.3	60.0	140.0	14.5	20.0
1,3-dichlorobenzene	5.0	ND	· ND	21.6	NA ·	20.0	ND	19,4	19.9	20.0	108.2	NA .	85.0	119.0	98.9	99.3	60.0	140.0	2.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	21.3	NA	20.0	ИD	19.5	19.8	20.0	106,3	NA	82.0	122.0	97.3	98.8	18.0	190.0	1.5	20.0
n-butyl-benzene	5.0	ND	ND	22.1	NA 🖗	20.0	ND	14.5	17.4	20.0	110.5	< NA	80.0	125.0	72.6	86.8	60.0	140.0	17.8	20.0
1,2-dichlorobenzene	5.0	ND	ND	22.1	NA	20.0	ND	20.7	21.0	20.0	110.6	NA	86,0	119.0	103.5	105.2	19.0	190.0	1.6	20.0
2-dibromo-3-chiloropropane	5,0	ND	ND	18.2	. NA	20.0	ND.	18.3	19.1	20.0	90.9	.: NA	66.0	134.0	91.4	95.7	60.0	140.0	4.6	20,0
1,2,4-trichtorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	16.9	18.1	20.0	96.4	NA	78.0	122.0	84.3	90.3	60.0	140.0	6.9	20.0
hexachlorobutadiene	5.0	ND	ND	21.2	NA.	20.0	ND .	12.0	: 16.0	20.0	106.2	NA .	73.0	125.0	60.1	80.1	60.0	140.0	28.5	20.0
naplhalene	10.0	ND	ND	19.8	NA	20.0	ND	19.4	20.5	20.0	98.9	NA	74.0	148.0	97.0	102.3	60.0	140.0	5.3	20.0
1,2,3-Irlahlorobenzene	5.0	ND	ND	22.8	NA	20.0	ND .	20.6	22.2	20.0	114.1	NA .	74.0	124.0	102.9	4444	989 (7119 9	140.0	3000	20.0

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

ND= Not Detected

NA= Not Applicable

RDL≖ Reporting Detection Limit

BLK= Method Blank

ANAL WORK GRP: WG48211

METHOD: 8270 MATRIX: WATER

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG48124

EXT DATE: 10/22/98 BENCH SHEET: V103P59

BLK FLNM: 8284,0*

LCS FLNM: 8285.D"

UN DATE : 10/23/98

SMPL ID: NA SMPL FLNM: NA MS FLNM : NA

MSD FLNM: NA

INSTRUMENT : HPMS5 ANALYST: mdc

				CONCE	TRATION , L	ng/L					PERCEI	NT RECOVER	RY , %		PERC	ENT	BE LI
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	8LANK	LCS_	LCS LCL LCS UC	CL SAMPLE	MS . MSI	O MS LCL MS UCI	MS . DUP RPD RP	_	SAMPLE
PYRIDINE	5.0	ND	100	2,8	ND	200	NA	NA	, NA	2.8	5 150	NA	NA NA	5 150	NA N	40	
N-NITROSODIMETHYLAMINE:	5.0	ND .	100	20.1	, ND	200	. NĄ	". NA	NA :	20,1	5 150	NA ·	NA NA	5 150	NA N	40	
ANILINE PHENOL	10.0	ND	100	17.3	ND	200	NA	NA	NA	17.3	5 150	NA.	NA NA		NA NA		
BIS(2-CHLOROETHYL)ETHER	5.0 5.0	ND	/ 100 :	22.8	ND · ·	200	NA:	NA ·	NA :	22.8	5 112	S NA S	NA NA		NA N		
-CHLOROPHENOL	5.0	ND	100	50.7	ND ND	200	NA	NA	NA .	50.7	12 158	NA .	NA NA	12 158	NA NA		
3-DICHLOROBENZENE	5.0	ND	100	47.2 · 46.3	ND ND	200 200	NA NA	; NA NA	NA NA	47.2. 48.3	23 134	NA S	NA NA		NA N		
4-DICHLOROBENZENE	10.0	ND	100	48.0	ND ND	200	NA	· NA	NA :	48.0	5 172	NA NA	NA NA NA NA	5 172	NA NA		:66 Y5 Y
ENZYL ALCOHOL	5.0	ND	100	37.6	ND	200	NA	NA NA	NA NA	37.6	20 124 5 150	NA NA	NA NA	AN THE PROPERTY OF THE PERSON	NA N		
2-DICHLOROBENZENE	5.0	ND	100	48.2	ND	200	.NA	NA :	NA	48.2	32 129	NA	NA NA	32 129	NA NA	ar er ga 🍈 🔒	200
METHYLPHENOL	5.0	ND	100	45.4	ND	200	NA	NA NA	NA .	45.4	5 150	NA NA	NA NA	5 150	NA NA	* * * * * * * * * * * * * * * * * *	7907 a 1417
IS(2-CHLOROISOPROPYL)ETHER	5.0	NO S	100	48.0	NO	200	. NA	· NA	NA.	48.0	36 166	NA SE	NA CONA		NA SEENA		
- & 4-METHYLPHENOL	5.0	ND	100	41.9	ND	200	NA	NA	NA	41.9	5 150	NA NA	NA NA	5 150	NA NA	ALL DESCRIPTIONS AND DESCRIPTIONS	11X
NITROSO-DI-N-PROPYLAMINE	5.0	· ND	100	48,4	ND .	200	NA 🔆	S NA	· NA	48.4	\$ 230	NA NA SO	NA NA		NA NA		\$3 XS
EXACHLOROETHANE	5.0	ND	100	46,5	ND	200	NA	NA	NA .	46.5	40 113	NA	NA NA	40 113	NA NA		250 250
ITROBENZENE	ં5.0 ે	ND :	100 🐇	52,5	ND	200	NA S	NA	NA .	52.5	35 180	NA	NA NA	35 180	NA NA	80 40 (1	
OPHORONE	5.0	ND	100	56,7	ND	200	NA	NA	NA.	56.7	21 198	NA.	NA NA	21 196	NA NA	40	
NITROPHENOL	5.0	ON	100 💝	55.0	NO	200	NA	NA 🕖	NA :	55.0	29 182	NA.	NA NA	29 162	NA NA	40 *	监狱等于
4-DIMETHYLPHENOL	5.0	ND	100	47.7	ND	200	NA	NA	NA	47.7	32 119	NA	NA NA	32 119	NA NA	40	
IS(2-CHLOROETHOXY)METHANE	25.0	ND	100	50.1	ND	200	NA S	∴ NÀ '''	NA 💥	50.1	. 33 💎 184	. ÇNA ∰	NA NA	33 184	NA NA	40	
ENZOIC ACID	5.0	ND	100	9.7	ND	200	NA	NA.	NA.	9.7	5 150	NA NA	NA NA	5 150	NA NA	40	l
4-DICHLOROPHENOL	5.0	ND	100	51.7	NO NO	200	NA .	NA :	NA	51.7	39 135	NA .	NA NA	39 135	NA NA	and account on a common of	
2,4-TRICHLOROBENZENE	5.0	ND	100	49.5	ND	200	NA POTE O POSSOSSI SI	NA	NA .	49.5	44 142	NA.	NA NA	44 142	NA NA		
APHTHALENE	5.0	ND	100	53.9	ND 🔻	200	NA NA	NA	NA .	53.9	21 133	NA 🦠	NA NA	21 133	NA NA	AND	[작가장].
CHLOROANILINE	5.0	ND	100	33.3	ND	200	NA Redering and the	NA .	NA	33.3	5 150	NA NA	NA NA	5 150	NA NA	NATIONAL PROPERTY.	2
EXACHLOROBUTADIENE	10.0	ND	100	51,4	ND	200	NA	NA .	SNA ∑	61.4	24 116	NA .	NA NA	24 116	NA NA	Comment of the control of the contro	ko 148. 2
CHLORO-3-METHYLPHENOL	5.0	ND	100	52.0	ND	200	NA chousen issa	NA .	NA (2012)	52.0	22 147	NA NA	NA NA	22 147	NA NA		
METHYLNAPHTHALENE	5.0	ND	100	49.9	ND	200	NA NA	, NA	NA VA	49.9	5 150	NA .	NA NA	5 150	NA NA	A	
EXACHLOROCYCLOPENTADIENE	5.0	ND	100	39.7	ND order ver elefati	200	NATE OF	NA .	NA Szikkásása	39.7	5 150	NA Laboration	NA NA	5 150	NA NA		85 SO T. 1:
4,6-TRICHLOROPHENOL 4,5-TRICHLOROPHENOL	25.0 5.0	ND O	100 100	52.0 53.9	ND ND	200 200	NA NA	NA.	MA NA	52.0 53.9	37 144 5 150	Se NA S	NA NA	37 144 5 150	NA NA	200,000,000,000	
CHLORONAPHTHALENE	25.0	ND	100	53.9 52.1	ND S	200	No comments of	NA ONA	NA EST	52.1	5 130 5 60 118 3	NA NA	NA NA	5 150	NA NA	The second control of the control of	
NITROANILINE	25.0 5.0	MD	100	61.9	ND	200	NA NA	NA NA	NA NA	51.9	5 150	NA NA	NA NA	5 150	NA NA	8000 00 Y00000 LA 00 L W	Mari 2 2 1
METHYLPHTHALATE	5.0	ND		67.9	ND O	200 200	NA CO	NÃ.	NA.	67.9	5 7 7 112	NA S	NA NA	1 5 112	I NA NA		49 834
CENAPHTHYLENE	5.0	ND ND	100	52.8	ND ND	200	MA	NA :	NA	52.8	33 145	NA.	NA NA	33 145	NA NA	Control of the Control	
6-DINITROTOLUENE	5.0	ND	100	52.0 64.7	SOUND SOU	200 200 ∷	NA .	NA :	NA SO	64.7	- 650° ∺ 50° 158 /	NA .	NA NA	50 6158	NA NA		350 44
NITROANILINE	25.0	ND	100	60.0	ND ND	200	NA NA	NA I	NA	60.0	5 150	NA NA	NA NA	5 150	NA NA	40	10 1 10 10 10 10 10 10 10 10 10 10 10 10
CENAPHTHENE	5.0	ND (100	ે54.0 ે	ND ND	200	NA C	. NA	. NA .	54.0	7 (47) 145. 145. 1	NA .	OSNA SOSTINA	145	NA NA		
4-DINITROPHENOL	25.0	ND ND	100	40.9	,Sign ND	200	NA NA	NA .	NA NA	40.9	5 191	NA NA	NA NA	5 191	NA NA	40	
NITROPHENOL	25.0	ND C	100	40.3	SO ND SO	200 - ⊘200 -	NA:	NA S	· NA	40.3	132	NA.	NA NA	j 5 j132	NA NA	\$	
IBENZOFURAN	5.0	ND	100	55.9	ND	200	NA NA	NA NA	NA NA	55.9	5 150	NA NA	NA NA	5 150	NA NA	3 970.40 73% 11. 40	
4-DINITROTOLUENE	5.0	ND	∵100 ⊹	90.0	NO CO	200	NA :	NA .	NA CC	90.0	/ 139 h	NA NA P	NA NA	39 139	NA NA	Carre againment d	kar sark

NOTES & DEFINITIONS :

NA = NOT APPLICABLE

ND = NOT DETECTED RDL=REPORTING DETECTION LIMIT NS = NOT SPIKED

WG48211.XLS

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG48211

METHOD: 8270 BENC

EXT DATE: 10/22/98
BENCH SHEET: V103P59

RUN DATE: 10/23/98 SMPLID: NA INSTRUMENT: HPMS5
ANALYST: mdc

MATRIX: WATER
CONCENTRATION UNITS: UG/L

BLK FLNM: 8284.0" LCS FLNM: 8285.0" SMPL FLNM: NA

MS FLNM : NA

PREP WORK GRP: WG48124

MSD FLNM: NA

			***	CONCENT	RATION	υg/L		····	ļ			PERCEN	T RECOVER	Υ %					PERCEN	r		BEY LIM
ANALYTE	RDL.	- BLANK	LCS SPIKE ADDEO	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	. SAMPLE		4450	112.1.01			MSD	555 (15)	WPLE	SS SAIK
DIETHYLPHTHALATE	5.0	ND	100	80.2	ND	200	NA	NA.	NA NA	60.2	5	114	NA NA	MS NA	MSD NA	MS LCL	114	DUP RPD NA	RPD	RPD UCL	Ø.,	▝█╌┰┙
LUORENE	5.0	ND:	100	60.4	ND	200	NA :	NA '	NA .	60.4	25	158	NA .	NA	NA	25	158	l Não	NA NA			-
-CHLOROPHENYL-PHENYL ETHER	5.0	ND	100	59.2	ND	200	NA	NA .	NA.	59.2	59	121	NA NA	NA NA	NA NA	59	121	NA NA	;NA.⇔ NA	-: 50 ., 40		
I-NITROANILINE	25.0	ON.	100	92.9	ND "	200	NA.	NA.	NA NA	92.9	5	150	i NA	NA :	∵ ÑA∵	5	150	NA S	NA.	40		h.: :
.2-DIPHENYLHYDRAZINE *	5.0	ND	100	67.5	ND	200	NA.	NA.	NA	67.5	5	150	NA.	NA NA	NA	5	150	NA NA	NA NA	40		
.8-DINITRO-2-METHYLPHENOL	25.0	ND	100	79.1	ND	200	NA '	NA :	NA N	79.1	100	181	NA	∷ ÑA∵	NA I	17 . \$ 40	130 181	NA C	NA S	≈ 40 · ·		
V-NITROSODIPHENYLAMINE **	5.0	ND	100	74.2	ND	200	NA.	NA	NA.	74.2	5	150	NA	NA NA	NA	5	150	NA NA	NA NA	40		1.54.33
BROMOPHENYL PHENYL ETHER	5,0	ND	100	60.3	NO O	200	NA:	NA .	NA -	60.3	S 53	127	NA S		ି NA	53		NA S	NA		433	5,5 %
EXACHLOROBENZENE	5.0	ON	100	79.2	ND	200	NA.	NA	NA.	79.2	5	152	NA NA	NA.	NA	5	152	NA NA	NA NA	40		·''' s.>
ENTACHLOROPHENOL	25.0	NO	100	93.3	ND.	200	NA.	NA :	NA S	93.3	354430	176	NA O	NA C	NA :	1942	176	NA S	NA	- 40 · ·	023	. 33.13
PHENANTHRENE	5.0	ND	100	83.2	ND	200	NA	NA	NA	83.2	54	120	NA.	NA.	NA.	54	120	NA	NA.	40		
NTHRACENE	> 5.0⊜	ND	100	82.4	ND:	200	NA:	NA .	NA .	82.4	27 7	133	NA .	· NA	NA	27	133	NA *	NA A	40	1:24	a
CARBAZOLE	5.0	ND	100	101,6	ND	200	NA.	NA.	NA .	101.6	5	150	NA.	NA	NA	5	150	NA NA	NA.	40		
N-N-BUTYLPHTHALATE	5.0	ND 30	100	100.9	ND:	200	NA	NA :	NA .	100 9	2.5942.5	118	NA SS	ં મેં	NA.	9:04:32	118	NA	NA.	ઃં એંં		200 2
LUORANTHENE	5.0	ND	100	102.4	ND	200	NA	NA.	NA.	102.4	26	137	NA NA	NA	NA.	26	137	NA.	NA	40		:
YRENE	5.0	ND:	100	89.6	ON O	200	NA.	NA :	NA	99.5	52	115	NA 33	. NA /	NA.	52	1.15	NA O	NA	40	20	
BUTYLBENZYLPHTHALATE	5.0	ND	100	106.3	ND	200	NA	NA	NA	106.3	5	152	NA.	NA	NA	5	152	NA.	NA	40		TPX: 1
ENZOVA)ANTHRACENE	10.0	ND	100	98.0	ND	200	NA S	NA.	l m	99.0	5.5	262	NA W	NA .	NA O	ं डेंं	262	NA S	NA .	40	:::A	
.3'-DICHLOROBENZIDINE	5.0	ND	100	52.7	ND	200	NA.	NA.	NA	52.7	33	143	NA	NA	NA	33	143	NA	NA NA	40		18 13 1 4 4
HRYSENE	5.0	ND	100	107.2	ND	200	NA :	NA NA	NA.	107.2	170	168	NA	NA .	NA .	17	168	NA	NA .	40	(7) A	75 37
SIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	108.5	ND	200	NA.	NA	NA	108.5	6 B	158	NA	NA	NA	а	158	NA	NA	40		(24-5) 4
PHOCTYLPHTHALATE	5.0	ND	100 %	101,7	ND.	200	NA :	NA.	. NA	101.7	\$25 \$ (\$5	146	NA S	NA C	NA :		146	NA S	NA .	× 40	. 50	2.2
ENZOIBIFLUORANTHENE	5.0	D	100	95.5	ND	200	NA.	NA.	NA	95.5	24	159	NA ·	NA	NA.	24	159	NA.	NA.	40	227	
ENZO(K)FLUORANTHENE	5,0	`ND∛	100	109,3	ND	200	NA.	NA NA	NA :	109.3	N 31.85 :	162	NA .	NA .	NA .	1	162	NA .	NA S	40	3.	
BENZOJAJPYRENE	5.0	ND	100	97.9	ND	200	NA NA	NA.	NA.	97.9	17	163	NA.	NA	NA	17	163	NA	NA	40	" `\	· · ·
NDENO[1.2.3-CD]PYRENE	5.0	ND S	>100 €	95.3°	ON.	200	NA.	NA NA	NA -	95.3	.	100 18171	NA .	S Ñ.	NA	6		NA D	NA .	~ 4 ŏ ∵		·建数
DIBENZIAHIANTHRACENE	5.0	ON NO	100	91.9	ND	200	ALA	NA NA	NA NA	91.9	1000 5	227	NA	RASSINA NA	NA NA	5	227	NA NA	NA NA	40		W W
ENZO(G.H,IPERYLENE	5.0	ND.	∞ 100 ∵	97,6	ND:	200	NA.	NA.	NA :	97.6	\\ \\$	219	, NA	NA /	NA	5	ू 219 ्	NA.	NA .	40,0	<i>2</i> ;	u f (j
SURROGATES													1									
-FLUOROPHENOL		34,7	100	32.4	NA	100	NA.	NA.	34.7	32.4	21	100	NA.	NA	. NA	21	100					$\neg \vdash$
		24.6	1000	22.9	NA :	100	NA .	1.20 2.3	24.6	22.9	10	94	NA CO	NA :	NA .	10	94		1988 P		Light.	. 4
ITROBENZENE - D5	18 . 200 et 27.	26.3	5D	26.4	NA.	50	NA NA	NA NA	56.7	52.8	35	114	NA NA	NA	NA.	35	114	Sec. 200 1 113		enturite d		
FLUOROBIPHENY		28.2	50 50∴	26.3	NA.	50	NA .	NA :	56.3	52.6	43	116	NA NA	NA .	. NA	43	116			8 pt 100 to		, in [2]
4,6-TRIBROMOPHENOL	N 15W 211 - \$1					100	NA	NA NA	57.2	75.7	10	123	NA.	NA NA	NA NA	10	123	0.73127		diam rawini •]
TERPHENYL - D14		57.2 47.9	100 50	75.7 ::55.2	NA NA	50	NA NA	NA NA	95.7	110.3	33 ·	123		NA N	∵ ÑA .	33	ં નીં	argrand of the	af Africa	2004 No. 1517		373 12

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 8081 WATERS , FRONT

INSTRUMENT: HP9

SAMPLE ID: 10-336-01

EXT'N DATE: 10/21/98

ANALYST: ECL

SMPL FLNM: 964

EXT'N BENCH SHT: V103P47

RUN DATE: 10/25/98

MS FLNM : 965

BLK FLNM: 962 LCS FLNM: 963

EXT'N WORK GRP: WG48068 ANAL WORK GRP: WG48292

MSD FLNM: 966

	ļ		CONCE	NTRATI	ON, ug	<u>/L</u>	<u> </u>		% 1	RECO	VERY	*****				PERCENT	<u> </u>	<u> </u>	
COMPOUND	ROL	Blank	LCS	Sample	a NS	MSD	Bian	k LÇS		S LCS	Sample	MS	MSD	MS LCL		MS/MSD RPD	RPD Adiveory Limits	Zark S.S.	Sample
									orm appund									8.3	
ALPHA-BHC	0.05	ND	பையை 0.242	DA I	0.794	and the state of t	NA	48.4	1911 (1911) 37	134	NA NA	79.4	71.7	H	145	10.2	0-43		
GAMMA-BHC	0.05	ND	0.239			0.826	. NA	47.8		: (27	111.11.11.11.	86.2	82.6		184	4.3	0-(8.	10.00	:::::
BETA-BHC	0.05	ND	0.349		1.04	1.03	NA	69.8	17		NA	103.8	103.1	N	129	0.7	0-28	4000	•••••
HEPTACHLOR	0.05	NO:	0.281		0.685		· NA	52.2	.34		NA :	68.5	86.4	I	139	24	0-37	3000	
DELTA-BHC	0.05	NO	0.343		1.15	1.10	NA	68.6	19		NA	115.2	110.4		138	4.3	0-78		*****
ALERIN	0.05	ND:	0.215	1 ND	0.769	0.723	. NA	43.0		122	NA	76.9	72.8		113	6.2	0.38		
HEPTACHLOR EPOXIDE	0.05	ND	0.273	I ND	0.937	0.875	NA	54.6	37		NA	93.7	87.5	1	135	6.8	0-40	l	
SAMMA CHLORDANE	0.05	NO	NA 1	ND:	NA.	NA:	∷ ŅÁ	NA:	45	119	NA :	NA:	NA.	4.5.5.7	115	NA	0.40		
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA.	NA.	54	119	NA	NA.	NA.	45	· · 1	NA.	0-17		
ENDOSULFAN-)	0.05	ND	0.235	(ND:	0.781	0.731	NA.	47.0	45	153	NA.	78.1	73.)	37.	123	6.6.	0-22		
4,4-DDE	0.10	ND	0.354) ND	1.03	0.943	NA	70.8	30	145	NA.	102.5	94.3	64	152	8.3	0-23		
pielprin	0.10	No:	0.341	I ND	1.08	1.00	∴NA	68,2	36	146	NA :	108:3	100.1	23	171	7,5	0-20	33.33	::::::
ENDRIN	0.10	ND	0.352	I ND	1.10	1.01	NA	70.4	30	147	NA	110.3	100.5	56	154	9.3	0-28		• • • •
44000	0.10	NO:	0.404) ND	1:06	0.973	. NA	80.8	31	341	:NÀ	105.1	97.8	56	179	ŔΫ	0-30	:::::	
ENDOSULFAN II	0.10	ND	0.298	I ND	0.865	0.805	NA.	59.6	D	202	NA .	86.5	80.5	21	117	7.2	0-18		
4,4 :00 1	0.10	NO	0.197	i ND	1,06	0.972	ŃÁ	79.4	25	60	NA.	105.5	97.2	42	ВĎ	8.2	0.22		::::::
ENDRIN ALDEHYDE	0.10	ND	0.240	ND.	0.709	0.670	NA	48.0	NA	NA	NA	70.9	67.0	21	115	5.7	0-40		
ENDOSULFAN SULFATE	0,(0,	ND:	0.262	(ND	0.789	0.728	NA	52:4	.26	144	NA	78.9	72.8	.01.	117	8.0	:0.6α·		
METHOXYCHLOR	0.50	ND	0.392	IND	1.03	0.945	NA.	78.4	NA	NA	NA	102.7	94.5	26	196	8.3	0-19	· · · · ·	
ENDRIN KETONE	0.10	Nb∵	0.326	i ND	0.923	0.856	: NA	65.2	NA	÷Νλ	NA :::	92.3	85.6	NA:	NĄ	7,5			÷::
Tech-CHLORDANE	1,00,	ND	NA	I ND	NA	NA	NA	NA	45	119	NA	NA	NA	45	115	NA	0-40		
70XAPHENE:	1.00	NO	NÀ	ND:	NA:	NA:	NA.	NA.	. 35	126	NA.	ŅĀ	NA.	40	25	. NA	0.40		
SURROGATES															士				
A.B.A. TETRACHLOFIO AAXYLENE		8:40	7.66	F-10.B.	13.0	10.6	42.0	38.3	(3	: 154	54.0	65.1	53.9	(3 :	154	4444			
DECACHLOROBIPHENYL	,	16.5	15.9		15.1	14.9	82.5	79,4	25	140	63.0	75.5	74.7	25					

NOTES & DEFINITIONS:

LCS, MS & MSD apilied at 2.5 up/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/kg

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

OL . DILUTED OUT

NO - NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 8061 WATERS, REAR

INSTRUMENT: HP9

SAMPLE ID: 10-336-01

EXT'N DATE: 10/21/98

EXT'N BENCH SHT: V103P47

ANALYST : ECL RUN DATE: 10/25/98 BLK FLNM: 962 LCS FLNM: 963 SMPL FLNM: 964 MS FLNM : '965

EXT'N WORK GRP: WG48068 ANAL WORK GRP: WG48292

MSD FLNM: 966

. •			CONCE	NTRATIO	ON, ug	۹			% REC	VERY				PERCENT			
COMPOUND	RDL	Blank	LCS	.Sample	ı MS	MŞD	Blank	LCS	LCS LC	S L. Sample	MS	MSD	MS MS	MS/MSD	RPD Advisory Umists	Blank LCS Sence	SP
	ME						1917.100	KÜÜĞ			Digrafi.	imir					
ALPHA-BHC	0.05	ND	0.222	ו ND	0.730	0.651	NA	44.4	37 13	NA I	73.0	65.1	51 14	11.4	0-43	M .	
GANNA BHC	0.05	:ND:	0.241	i. NO	0.610	0.760	: NA :::	48.2	32. 12	, NA	81.0	76.0	54 . 13	6,4	0.18		
BETA-BHC	0.05	ND	0.295	I NO	0.945	0.901	NA.	59.0	17 14	NA .	94.5	90.1	51 12	4.8	0-28		
HEPTACHCOR	0.05	, NO	0.208) ND	0,732	0,693	: NA	41.2	34:11	NA :	73.2	69.8	.¥0∶13	9 ∵5,5 ∵∶	· · · · · · · · · · · · · · · · · · ·		
DELTA-BHC	0.05	ND	0.335	I ND	1.05	1.00	· NA	67.0	19 14	NA .	105.0	100.0	56 13	4.9	0-78		
ALOMIN	0.05	NO:	0.208) ND	0.744	0.703	NA.	41.6	42 12	2 ((NA))	74.4	70.3	;2 0 : 14	1	0-38	::: ():::	
HEPTACHLOR EPOXIDE	0.05	ND	0.264	I ND	0.890	0.845	, NA	52.8	37 14		89.0	64.5	51 13	*** ***	0.40		5550
GAMMA-CHLOROANE	0.05	ND,	, NA	, NO.	ŊĄ.	NA	T. NA	. NA	(45) (1)		TONAL!	::::NA:::	(45-)4€	1	,;;; 0;4Q ;	X	
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA .	NA	54 11		NA .	NA	45 11		0-17	.5555	355
ENDOSVILĖAN ()	0.05∙	∴Nb	0.233			0.703	(in NA)	46 6	45 15		74.0	∵70.3	-37.∵12		0.22		400
4,4-DOE	0.10	ND	0.355		1.00	0.936	, NA	71.0	30 14	,	100.1	93.6	64 15	· II	0-23	::::::::::::::::::::::::::::::::::::::	
DIEL DRIN	0.10:	(NO)	0.380		1;04:	0.975	11 (NA 11)	:: :68:0 · ∶	36 : 14		1,03,8	97.5	-23: 17	2	0-20	****	·
ENDRIN	0.10	ND	0.386		1,1 9 - 1,110	1.11	NA	77 2012/201	30 14		119,4	110.9	56 15	100	0.20	00000)::::::
	0,10	ND.	0.306			0.805	:;::(NA,1;;;	51.2	31:14		86,2	97.9	(5 0) (7) 21 - 11	1	0-18	******	
ENDOSULFAN N	0.10	ND	0.410		1.06	0.979	NA	82.0	D 20		105.9	97.9	42 16		9-22		
-00-00-00-0-1 4.04-0007 0-00-00-00-00-0	. b.10:	· ND;	.0.392			0.924	· ····NA:	78.4	:25::16 NA N		68.4	64.9	21 11		0-40		
ENDRIN ALDEHYDE	0.10	ND	0.247	ويعرفر فرفره		0.649	NA	49.4			76.6	71.6	31:11	A	0.30		
ENDOSULFAN BULFATE	0.10	,VQ:	0.266			0.718	(1) (NA)	(: 53;2;) 80	26: 14 NA N		98.8	92.6	26 19		0-19		1,1,12
METHOXYCHLOR	0.10	ND	0.402		0.988	0.926	10000	 63	NA N		86.7	81.2	NA N				
: ENDRING KETONE	1.0	NO:	0.313		. 9,867. NA	NA NA	: : NA : . : NA	NA	45 11	. K	NA NA	NA NA	45 11		0.40		,,,,
Tech-CHLORDANE		NO		I ND		∴NA.	O NA	: NA:	41 : 12		NA .	NA.	40 . 12		0.40		
TOXARHENE	1000	:NO:::	(CINATO	i ND	:::NA::	(inte		CONTRACT.	. 7. I . 1. 1 I . 1	,,,,,,,,	1,1,4,40,11		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
SURROGATES																	
nana <u>aananaaan</u> tabiib	2000	6.50	ri di dala	47484	1434	9.75	0.14(60)	38.9	13: 15	52.0	61.6	46.0	13 13				
z, a, b, a, t, e,		0,31∷ 15,0	· · · · ·	1:10.4 11.8	13.9	13.9 13.9	79.1	.∵⊃⊝.≠.∙. 75.8	25 14		69.3	69.6	25 14			, , , ,	

NOTES & DEFINITIONS:

LCS, MS & MSD opiked at 2.5 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/kg

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL = DILUTED OUT ND - NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / PCB WATERS , REAR

INSTRUMENT: HP10

EXT'N DATE: 10/21/98

SMPL ID: 10-367-01

ANALYST: CDB

SMPL FLNM: 054R0101

EXT'N BENCH SHT: V103P48 EXT'N WORK GRP: WG48069

RUN DATE: 10/22/98 ANAL WORK GRP: WG48155

BLK FLNM: 052R0101 LCS FLNM: 053R0101 LCS Dup FLNM: NA

MS FLNM: 055R0101 MSD FLNM: 056R0101

		<u> </u>	CONCENT	RATION,	ug/L			···	% REC	OVER	ťΥ						PERCENT				
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LC\$	LCS LC		Sample	_MS	MSD	MS LCL	MS UCL	RPD	RPD Advisory Limits	Mank	গ্র	Sample	SS SS
AROCLOR 1016	0.5	ND.	1.81	ND	4,15	4.04	NA	72.2	49 4			. #2 #6 PA	700		400		X 1.00				والإ
AROCLOR 1221	0,5	ND	NA	NO	NA.	NA.	NA VA	NA :	48 12 NA N	rans H alisa	NA NA	79.0 NA	76.9 NA	48 NA	125 NA	2.7 NA	NA NA	deces	300000		****
AROCLOR 1232	0.5	ND	NA.	ND	NA	NA	NA	NA	NA N	0000	NA	NA NA	NA	NA	NA	NA NA	NA NA	200000000	19201000;	00000000	900000 PA(S)
AROCLOR 1242	0.5	ND	NA .	ND	NA	NA .	NA	NA	NA N	*	NA	NA	NA .	NA	NA	NA.	NA.				
AROCLOR 1248 AROCLOR 1254	0.5 1.0	ND ND	NA	ND	NA NA	NA Geografica	NA (1200/2003)	NA 80% Lizz-1000	NA N	0.4	NA	NA AUGUS ANGAN	NA CONTRACTOR	NA SOURCE	NA	NA .	NA	1 35-5399			01200000 20000
AROCLOR 1260	1.0	ND	NA 2.53	ND ND	NA	5.47	NA NA	101	NA N 59 12	227	NA	NA	NA 104	59	NA 122	NA S	0-40				
	#####									• •					***	0.4	- NA				
SURROGATES													20,000,0,000							Applications of	200.00 0,00
24,5,6-TETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		0.076 0.148	0,113 0.150	0,113 0.164	0,249 0.406	0,251 0,396	38.0 74.0	58.5 75.0	13 15 25 14		56.5 62.0	59.3 96.7	59.8 94.3	13 25	154 140						

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 2.5 ug/kg SURROGATES spiked at .200 ug/kg NA = NOT APPLICABLE DL = DILUTED OUT

ND = NOT DETECTED ROL*REPORTING DETECTION LIMIT LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON Environmental Services 109 Starlite Park Marietta, Ohio 45750 Phone: (740) 373~4071

Versar, Inc. 9200 Rumsey Road Columbia, MD 21045-1934

Attention: William Burton

Login #: L9810551
Report Date: 11/10/98
Work ID: 4119-007/PEDRICKTOWN

Date Received: 10/27/98

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9810551-01	INLET 102698/WATER	L9810551-02	INLET 102698/SEDIMENT

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDQH ELAP ID: 10861

Dennis S. Tepe



KEMRON ENVIRONMENTAL SERVICES

Login #L9810551 November 10 998 12:53 pm

Lab Sample ID: L9810551-01 Client Sample ID: INLET 102698/WATER Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Collected: 10/26/98 1330

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time Meth	ođ
Total Suspended Solids	mg/L	130000	(A)	5.0	1	N/A	DLP	10/28/98	10:45 160.	2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810551-01

Client Sample ID: INLET 102698/WATER
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 10/26/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: N/A Extract Date: 10/29/98 Analysis Date: 10/30/98 Time: 19:23

Instrument: HP10 Analyst: CDB Lab File ID: 063R0101 Method: 8082\3510C Run ID: R55488

Batch : WG48607

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.55 0.55 0.55 0.55 0.55 1.1	1.1 1.1 1.1 1.1 1.1 1.1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	4.00 * 28.8	(13 - 154%) (25 - 140%)			

TCLP Extract Date: N/A

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810551-01 Client Sample ID: INLET 102698/WATER Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

Extract Date: 10/29/98 Analysis Date: 11/04/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/26/98

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C

Analyst: ECL Lab File ID: 1241

Run ID: R55837 Batch : WG48856

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	/7				
319-85-7	beta-BHC			ND	0.055	1.1
319-86-8	delta-BHC.	ug/L		ND	0.055	1.1
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.055	1.1
76-44-8	Heptachlor			ND	0.055	1.1
309-00-2	Aldrin	ug/L		ND	0.055	1.1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1
60-57-1	Dieldrin	ug/L		ND	0.055	1.1
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1
72-20-8	Endrin	ug/L	•	ND	0.11	1.1
33213-65-9	Endosulfan II	ug/L		ND	0.11	1.1
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1
50-29-3	A AL-DOT	ug/L		ND	0.11	1.1
72-43-5	4,4'-DDT. Methoxychlor.	ug/L		ND	0.11	1.1
53494-70-5	Prodrin ketono	ug/L		ND	0.55	1.1
7421-93-4	Endrin ketone	ug/L		ND	0.11	1.1
5103-71-9	Endrin aldehyde	ug/L		ND	0.11	1.1
5103-74-2	alpha Chlordanegamma Chlordane	ug/L		ND	0.055	1.1
8001-35-2	Toronhano	ug/L		ND	0.055	1.1
0001-33-2	Toxaphene	ug/L		ND	1.1	1.1
SURR	OGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xvlene	2.4	43 * (13 - 154%)		
	Decachlorobiphenyl	31.8		25 - 140%)		
		J.,	,	23 - 1406/		

Product: 827-TCL - TCL Semivolatiles

Dil. Type: N/A COC Info: N/A Lab Sample ID: L9810551-01 Sample Weight: N/A Client Sample ID: INLET 102698/WATER Extract Volume: N/A

Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water Date Collected: 10/26/98 % Solid: N/A

Instrument: HPMS3

TCLP Extract Date: N/A Extract Date: 10/29/98 Analysis Date: 10/29/98 Time: 23:38 Method: 8270C\3510C Run ID: R55852 Batch: WG48664 Analyst: MDC Lab File ID: 14922

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	10	2
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	10	2
95- 57-8	2-Chlorophenol	ug/L	ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2
95-48-7	2-Methylphenol	ug/L	ND	10	2
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	ND	10	2
106-44-5	4-Methylphenol	ug/L	ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2
67-72-1	Hexachloroethane	ug/L	ND	10	2
98-95-3	Nitrobenzene	ug/L	ND	10	2
78-59-1	Isophorone	ug/L	ND	10	2
88 <i>-75-</i> 5	2-Nitrophenol	ug/L	ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	10	2
120-83 - 2	2,4-Dichlorophenol	ug/L	ND	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2
91-20-3	Naphthalene	ug/L	ND	10	2
106-47-8	4-Chloroaniline	ug/L	ND	10	2
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2
77-47- 4	Hexachlorocyclopentadiene	ug/L	ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2
88-74-4	2-Nitroaniline	ug/L	ND	50	2
131-11-3	Dimethylphthalate	ug/L	ND	10	2
208-96-8	Acenaphthylene	ug/L	ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2
99-09-2	3-Nitroaniline	ug/L	ND	50	2
83-32-9	Acenaphthene	ug/L	ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2
100-02-7	4-Nitrophenol.:	ug/L	ND	50	2
132-64-9	Dibenzofuran	ug/L	ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2
84-66-2	Diethylphthalate	ug/L	ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Dil. Type: N/A COC Info: N/A Lab Sample ID: L9810551-01 Sample Weight: N/A Extract Volume: N/A Client Sample ID: INLET 102698/WATER

Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

Date Collected: 10/26/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS3 Method: 8270C\3510C

Extract Date: 10/29/98 Analyst: MDC Run ID: R55852 Analysis Date: 10/29/98 Time: 23:38 Batch: WG48664 Lab File ID: 14922

CAS #	Compound	Units	Result	Qualifiers	RL.	Dilution
86-73-7	Fluorene	ug/L		ND	10	2
100-01-6	4-Nitroaniline	ug/L		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	50	2
85-01-8	Phenanthrene	ug/L		ND	10	2
120-12-7	Anthracene	ug/L		ND	10	$\overline{2}$
86-74-8	Carbazole	ug/L		ND	10	$\bar{\mathbf{z}}$
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	$\bar{2}$
206-44-0	Fluoranthene	ug/L		ND	10	2
129-00-0	Pyrene	ug/L		ND	10	$\overline{2}$
85-68-7	Butvlbenzvlphthalate	ug/L		ND	10	$\bar{2}$
91-94-1	3,31-Dichlorobenzidine	ug/L		ND	20	2
56-55 - 3	Benzo(a) anthracene	ug/L		ND	10	2
218-01-9	Chrysene	ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L		ND	10	2
205-99-2	Benzo(b) fluoranthene	ug/L		ND	10	2
207-08-9	Benzo(k) fluoranthene	ug/L		ND	10	2
50-32-8	Benzo (a) pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd) pyrene	ug/L		ND	10	$\bar{2}$
53-70-3	Dibenzo (a, h) Anthracene	ug/L		ND	10	$\bar{2}$
191-24-2	Benzo(g,h,i) Perylene	ug/L		ND	10	2
SURR	OGATES- In Percent Recovery: 2-Fluorophenol	4.70 5.80 2.00 1.10	*SMI *SMI *SMI *SMI	(21 - 100%) (10 - 94%) (35 - 114%) (43 - 116%)		
	2-Fluorobiphenyl	1.90 0.700	*SMI *SMI	(10 - 123%) (33 - 141%)		

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810551-01 Client Sample ID: INLET 102698/WATER Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/06/98 Time: 14:27

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/26/98

% Solid: N/A

Instrument: HPMS2

Analyst: SLT Lab File ID: 2VR27415

Method: 8260B Run ID: R55807 Batch : WG49007

CAS #	Common d					. 2007
	Compound	Units	- Result	Qualifiers	D.	
74-87-3				Z-m-m-r-O-D	RL	Dilution
74-83-9				ND	10	
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3				ND	10	1
75-09-2		ug/L		ND	10	1
67-64-1				ND		1
75-15-0				ND	5.0	1
75-35-4		ug/L		ND	10 5.0	1
75-34-3	1,1-Dichloroethane	ug/L		ND		1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
107-06-2	1.2-Dichloroethano	ug/L		ND	5.0	1
78-93-3				ND	5.0	1
71-55-6	1.1.1-Trichloroethana			ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L		ND	10	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1.2-Dichloropropage	ug/L		ND	5.0	1
10061-01-5	1,2-Dichloropropane.	ug/L	•	ND	5.0	1
79-01-6	cis-1,3-Dichloropropene. Trichloroethene. Dibromochloromethane			ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1.1.2-Trichloroethore	ug/L		ND	5.0	1
71-43-2				ND	5.0	1
10061-02-6				ND	5.0	1
75-25-2	trans-1,3-Dichloropropene	ug/L		ND	5.0	1
108-10-1	Bromoform4-Methyl-2-nentanen	ug/L		ND	5.0	1
591-78-6	4-Methyl-2-pentanone	ug/L		ND	5.0	1
127-18-4	2-Hexanone	ug/L		ND	10	1
79-34-5	**CT GCTTOT OF [ND	10	1
108-88-3				ND	5.0	1
108-90-7	Toluene	uq/L		ND	5.0	1
100-41-4	CILICATOR CODELIZEDE	- '/-		ND	5.0	1
100-42-5	TOMY TO DELIZEDE	=: '/+		ND	5.0	1
1330-20-7		. . / .		ND	5.0	1
1000-20-7	Xylenes, Total	ug/L		ND	5.0	1
SURR	OGATES- In Percent Recovery:	-		ND	5.0	1
	Dibromofluoromethane					
	1,2-Dichloroethane-d4	94.8	(8	6 - 118%)		
	Toluene-d8	95.1	ă î			
	Toluene-d8	94.7	ìε			
	p-Bromofluorobenzene	94.4		5 - 115%)		
RL = Reporting Li						

Login #L9810551 November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9810551-02 Client Sample ID: INLET 102698/SEDIMENT Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Soil Collected: 10/26/98 1330

% Solid: 12 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	12		1.0	1	N/A	DIH	11/06/98		D2216-90

Product: 826-TCL - TCL Volatiles

TCLP Extract Date: N/A

Extract Date: N/A

Lab Sample ID: L9810551-02 Client Sample ID: INLET 102698/SEDIMENT Site/Work ID: 4119-007/PEDRICKTOWN

Analysis Date: 11/05/98 Time: 13:36

Matrix: Soil

Dil. Type: N/A COC Info: N/A Date Collected: 10/26/98

Instrument: HPMS6 Analyst: CMS

Lab File ID: 6VR11220

Sample Weight: N/A Extract Volume: N/A

* Solid: 12

Method: 8260B Run ID: R55844 Batch: WG48909

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	/lea				
74-83-9	Bromomethane	/ 1		ND	83	1
75-01-4	VINVI CHIDING	110 / 100		ND	83	1
75-00-3	CULOTOREINANG	/1		MD	83	1
75-09-2	Methylene chloride	ug/kg ug/kg		ND	83	ı
67-64-1	Acecone		22.0	ND	42	1
75-15-0	Carbon disulfide	110/160	210	170	83	1
75-35 - 4	I,I-Dichioroethene	110 / lea		ND	42	1
75 - 34-3	1,1-Dichloroethane. 1,2-Dichloroethene (Total).	ug/kg		ND	42	1
540-59-0	1,2-Dichloroethene (Total)	ug/kg		ND	42	1
67 - 66-3	CIIIOFOIOIM	11& /lea		ND ND	42	1
107-06-2	1,2-Dichloroethane	uď/kď		ND	42	ī
78-93 - 3	2-Bucanone	ug/kg		ND	42	1
71-55-6	1,1,1-Trichloroethane	ug/kg		ND	83	1
56-23 - 5	Carbon tetrachioride	110 /kg		ND	42	Ŧ.
75-27-4	Bromodichioromethane	ug/kg		ND	42	<u> </u>
78-87-5	1,2-Dichioropropane	ug/kg		ND	42	1
10061-01-5	Cls-1,3-Dichioropropene	ug/kg		ND	42	1
79-01-6	Trichloroethene	ug/kg		ND	42	,
124-48-1	Dibromochioromethane	ug/kg		ND	42 42	1
79-00-5	1,1,2-Trichloroethane	ug/kg		ND		<u> </u>
71-43-2	Benzene	ug/kg		ND	42 42	<u> </u>
10061-02-6	trans-1,3-Dichloropropene	ug/kg		ND	42	1
75-25-2	Bromoform	ug/kg		ND	42	7
				412	7: 4	1

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810551-02 Client Sample ID: INLET 102698/SEDIMENT Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Soil

TCLP Extract Date: N/A Extract Date: N/A Analysis Date: 11/05/98 Time: 13:36

Dil. Type: N/A COC Info: N/A

Date Collected: 10/26/98

Sample Weight: N/A Extract Volume: N/A

% Solid: 12

Instrument: HPMS6

Analyst: CMS Lab File ID: 6VR11220

Method: 8260B Run ID: R55844 Batch: WG48909

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
108-10-1 591-78-6 127-18-4 79-34-5	4-Methyl-2-pentanone	ug/kg ug/kg ug/kg ug/kg		ND ND ND ND	83 83 42 42	1 1 1	
108-88-3 108-90-7 100-41-4 100-42-5	Toluene	ug/kg ug/kg ug/kg ug/kg ug/kg		ND ND ND ND ND	42 42 42 42 42	1 1 1	
1330-20-7 sur r	Xylenes, Total	117 127 115 126	*,RE (80 - 120%) 80 - 120%) 81 - 117%) 74 - 121%)	72	•	

Order #: 98-10-551 November 10, 1998 12:53 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48549	R55037	L9810551-01	Water	Organochlorine Pesticides	8081A/3510C	ECT	26-0CT-1998	04-NOV-1998		Extraction
WG48550	R55488	L9810551-01	Water	PCB's (Water)	8082\3510C	CDB	26-OCT-1998	30-OCT-1998	19:23	Extraction
WG48554	R55852	L9810551-01	Water	TCL Semivolatiles	8270C\3510C	MDC	26-OCT-1998	29-OCT-1998	23:38	Extraction
WG48585	R55249	L9810551-01	Water	Total Suspended Solids	160.2	DLP	26-OCT-1998	28-OCT-1998	10:45	Conventionals
WG48607	R55488	L9810551-01	Water	PCB's (Water)	8082\3510C	CDB	26-0CT-1998	30-OCT-1998	19:23	Semivolatile - GC
WG48664	R55852	L9810551-01	Water	TCL Semivolatiles	8270C\3510C	MDC	26-OCT-1998	29-OCT-1998	23:38	Semivolatile - GC/MS
WG48856	R55837	L9810551-01	Water	Organochlorine Pesticides	8081A\3510C	ECL	26-OCT-1998	04-NOV-1998		Semivolatile - GC
WG48909	R55844	L9810551-02	Soil	TCL Volatiles	8260B	CMS	26-OCT-1998	05-NOV-1998	13:36	Volatile - GC/MS
WG48996	R55802	L9810551-02	Soi.1	Percent Solids	D2216-90	DIH	26-0CT-1998	06-NOV-1998	12:45	Conventionals
WG49007	R55807	L9810551-01	Water	TCL Volatiles	8260B	SLT	26-OCT-1998	06-NOV-1998	14:27	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark BAD - - Becky A. Diehl CEB - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens

CRC - - Carla R. Cochran

DIH - - Deanna I. Hesson DKM - Dewey K. Miller

DLN - - Deanna L. Norton

DLP - - Dorothy L. Payne

ECL - - Eric C. Lawson

FEH - - Fay E. Harmon

HV - - Hema Vilasagar

JLH - - Janice L. Holland

TWR - - John W. Richards

JYH - - Ji Y. Hu

KHA - - Kim H. Archer

KMS - - Kevin M. Stutler

KRA - - Kathy R. Albertson

MDA - - Mike D, Albertson

MDC - - Michael D. Cochran

MES - - Mary E. Schiling

MLS - - Michael L. Schimmel

MMB - - Maren M. Beery

RDC - - Rebecca D. Cutlip

RDS - Rebecca D. Sutton

REF - - Ron E. Fertile

REK - - Robert E. Kyer

RSS - - Regina S. Simmons

RWC - - Rodney W. Campbell

SJK - Sindy J. Kinney

SJM - - Shawn J. Marshall

SLP - . Sheri L. Pfalzgraf

SLT - - Stephanie L. Tepe

SMW - Shauna M. Welch

SPL - - Steve P. Learn

TIW - - Thomas J. Ware

TRS - Todd R. Stack

VC - - Vicki Collier

VMN - - Vincent M. Nedeff

Quali	fier Description	Qualifier	Description
(A) (B) (C) + < > B C	See the report narrative See the report narrative See the report narrative Correlation coefficient for the MSA is less than 0.995 Less than Greater than Present in the method blank Confirmed by GC/MS Surrogate or spike compound out of range	N NA ND NF NFL NI NR NS P	Tentatively Identified Compound (TIC) Not applicable Not detected at or above the reporting limit (RL) Not found No free liquid Non-ignitable Analyte is not required to be analyzed Not spiked Concentration > 25% difference between the two GC
CG D DL E F FL I J L	Confluent growth The analyte was quantified at a secondary dilution factor Surrogate or spike was diluted out Estimated concentration due to sample matrix interference Present below nominal reporting limit (AFCEE only) Free liquid Semiquantitative result, out of instrument calibration range Present below nominal reporting limit Sample reporting limits elevated due to matrix interference Duplicate injection precision not met	QNS R RA RE S SMI SP	columns Quantity not sufficient to perform analysis Analyte exceeds regulatory limit Reanalysis confirms reported results Reanalysis confirms sample matrix interference Analyzed by method of standard addition Sample matrix interference on surrogate Reported results are for spike compounds only Too numerous to count Analyzed for but not detected Post-digestion spike for furnace AA out of control limits Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

KEMRON ENVIRONMENTAL SERVICES OHIO VALLEY LABORATORY QUALITY CONTROL SUMMARY

WORKGROUP: wg46585 RUN DATE: 10/28/98

METHOD:

160.2

ANALYST: dlp

MATRIX: Water

UNITS:

mg/L

DUPLICATE: 10-551-01

,				·	<u>, — </u>					PERCENT RECOVERY						PERCENT RPD		
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	мѕ	MS LCL	MS UCL_	REP RPD	RPD UCL	
TSS	5.00	ND	50.00	50.00		126000.00	NR	NR	NR	100.0	83.5	120.0	NR	NR	NR	0.00	20.00	

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA - NOT APPLICABLE

ND . NOT DETECTED

NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T- LCS # TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES







PROJECT NO.		CT NAM						7	7			PARA	MET			INDUSTRIAL	ΙΥ
419-007	Pe	dn	ck	tow	JN.			/5	<u>/</u>	7		7	WE 1			HYGIENE SAMPLE	N
SAMPLERS: (Signatur	re)				(Printed)		7	NE /	./.	\@ <u>`</u>	3	' /	Y	/ /	' / /		
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FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	/{	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		31/AS	9 to 1	9/					REMARKS	
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(Printed)					Printed) Gregory							J. Co	loe	er\	Jemp	6.0,619	

		1001								
	Work Order_	/ 48 IC)59/ Client_\	1ermo) #of S:	umples	Q Due Date_	11/10	Page	
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		·	ADT	From		Ву	ADT	То	Ву	
		<u></u>				2				
	T55	Anal	DLP 10-27-97/20	Lalk-JU	wet	10/cl	De 10-22-54/115	Archive	PNG	Anchine
	BNA	Ext	1429/18 (2) 1305	WALKEN	ELAG	19/CX	URX38 PSOI WINC		Big	Disposed
	PB	1	+	4	1	Ba	Smw 1930/18 80000		Big	Dispoil
2	9240	and	CMS WStare 0745	V-1	VOA		Bg 11/10/98	achie		aichur
	PCT-5		auhlululusavias	archive user tres the	wet	bia	del1/11/4/13/01/98		Big	Orchin
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	Work Order	19810	역을 Client	Ver-m	$\overline{}$!
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omithe #	Analyses	Reason	Removed By ADT	Removed	MovedTo	Reliq.	Ret'd by	Ret'd	Rec'd	Reason
			ADI	From		Ву	ADT	То	Ву	
01	CN	Anal,		1 4 1 . —					9	
o l	PEST/PCB		Justiol 21 1 98 10910	Walk In	Wet Lab	DR	JUR/10/21/98/1310	Archive	1519	Cucline
<u></u>		CXT	1-11/15E() CM70	WALKON	ELAA	1019	CASOBS PERFORMINE	Dungota	25	proposal
	BWA		CEB 10/27/18/01300	WALKIN	ELAB	Bid	Smuldarbarran	Dimsot.	Dia	Disposal
1-9	826	AN	mes 10/24/98	Y-1	LIDA	Brg	11/05/98	Circhuc	Big	archive
1-3	PCIS	7257	De-11/0/27/96/1445	walk in	wet	pla			1.72	achier
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KEMRON Environmental Services 109 Starli Marietta, Oh

Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road

Columbia, MD 21045-1934

Login #: L9810634
Report Date: 11/12/98
Work ID: 4119-007/PACOE PEDRICKTOWN

Date Received: 10/30/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description	
L9810634-01 L9810634-03	WEIR 102998 WEIR 102798	L9810634-02 L9810634-04	WEIR 102898 BG202998	

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOM-ELAP ID: 10861

Dennis S. Tepe

KEMRON ENVIRONMENTAL SERVICES

jin #L9810634
/ember 12, 1998 03:51 pm

Lab Sample ID: L9810634-01 ient Sample ID: WEIR 102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 10/29/98 N/A

COC Info: N/A

alyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
anide, Totaltal Suspended Solids	mg/L mg/L	.28	ND	0.01 5.0	1	N/A N/A	SJM DLP	11/09/98 11/02/98	13:00 9010B\9014 12:00 160.2

TCLP Extract Date: N/A

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-01 Client Sample ID: WEIR 102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Extract Date: 11/03/98

Matrix: Water

Analysis Date: 11/05/98 Time:

Sample Weight: N/A Extract Volume: N/A

COC Info: N/A Date Collected: 10/29/98

Dil. Type: N/A

% Solid: N/A

Instrument: HP4

Method: 8082\3510C Run ID: R55930

Analyst: ECL Lab File ID: 035R0101

Batch : WG48852

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.55 0.55 0.55 0.55 0.55 1.1	1.1 1.1 1.1 1.1 1.1 1.1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	55.0 50.0	(13 - 154%) (25 - 140%)		

qin #L9810634 vember 12, 1998 03:51 pm

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-01 lient Sample ID: WEIR 102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Date Collected: 10/29/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C

Analyst: ECL Lab File ID: 1255

Run ID: R55786 Batch: WG48855

LP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
319-84-6	alpha-BHC	ug/L		ND	0.055	1.1	
319-85-7	beta-BHC	ug/L		ND	0.055	1.1	
319-86-8	delta-BHC	ug/L		ND	0.055	1.1	
58-89-9	gamma-BHC (Lindane)	uğ/L		ND	0.055	1.1	
76-44-8	Heptachlor	ug/L		ND	0.055	1.1	
309-00-2	Aldrin	ug/L		ИD	0.055	1.1	
1024-57-3	Heptachlor epoxide	ug/L		ND	0.055	1.1	
959-98-8	Endosulfan I	ug/L		ND	0.055	1.1	
60-57-1	Dieldrin	ug/L		ND	0.11	1.1	
72-55-9	4,4'-DDE	ug/L		ND	0.11	1.1	
72-20-8	Endrin	ug/L		ND	0.11	1.1	
13213-65-9	Endosulfan II	ug/L		ND	0.11	1.1	
72-54-8	4,4'-DDD	ug/L		ND	0.11	1.1	
1031-07-8	Endosulfan sulfate	ug/L		ND	0.11	1.1	
50-29-3	4,4'-DDT	ug/L		ND	0.11	1.1	
72-43-5	Methoxychlor	ug/L		ND	0.55	1.1	
3494-70-5	Endrin ketone	ug/L		ND	0.11	1.1	
7421-93-4	Endrin aldehyde	ug/L		ND	0.11	1.1	
5103-71-9	alpha Chlordane	ug/L		ND	0.055	1.1	
5103-74-2	gamma Chlordane	ug/L		ND	0.055	1.1	
	Toxaphene	ug/L		NĎ	1.1	1.1	
8001-35-2	Toxaphene	~5, ~					
SITER	OGATES- In Percent Recovery:						
2014	2,4,5,6-Tetrachloro-m-xylene	51.6	(13 - 154%)			
	Decachlorobiphenyl	49.3	(25 - 140%)			

⁻ Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-01 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water Extract Volume: N/A

Date Collected: 10/29/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: 11/02/98 Instrument: HPMS4 Analyst: MLS Method: 8270C\3510C

Run ID: R55716 Analysis Date: 11/03/98 Time: 17:35 Lab File ID: 12113 Batch : WG48836

CAS #	Compound	Units	Result Qua	alifiers RL	Dilution
108-95-2	Phenol	ug/L	1	ID 12	2.3
111-44-4	Bis(2-Chloroethyl)ether	uq/L		ĪD 12	2.3
95-57-8	2-Chlorophenol	ug/L		iD 12	2.3
541-73-1	1,3-Dichlorobenzene	ug/L		īD 12	2.3
106-46-7	1,4-Dichlorobenzene	ug/L		Ď 12	2.3
95-50-1	1,2-Dichlorobenzene	ug/L		D 12	2.3
95-48-7	2-Methylphenol	ug/L		D 12	2.3
108-60-1	DIS(2-Chlorolsopropy))ether	ug/L		Ď 12	2.3
106-44-5	4-Mernyinnenoi	ug/L		D 12	2.3
621-64-7	N-Nitroso-di-n-propylamine. Hexachloroethane.	ug/L		iD 12	2.3
67-72-1	Hexachloroethane	ug/L		D 12	2.3
98-95-3	Nitrobenzene	ug/L		D 12	2.3
78-59-1	Isophorone	ug/L		D 12	2.3
88-75-5	2-Nitrophenol	ug/L		D 12	2.3
105-67-9	2,4-Dimethylphenol. Bis(2-Chloroethoxy)Methane.	ug/L		D 12	2.3
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L		D 12	2.3
120-83-2	2.4-Dichlorophenol	ug/L		D 12	2.3
120-82-1	2,4-Dichlorophenol. 1,2,4-Trichlorobenzene.	ug/L		D 12	2.3
91-20-3	Naphthalene	ug/L	N		
106-47-8	4-Chloroaniline		N		2.3
87-68-3	Hexachlorobutadiene	ug/L			2.3
59-50-7	4-Chloro-3-methylphenol	ug/L	N		2.3
91-57-6	2-Methylnaphthalene	ug/L	N		2.3
77-47-4	Hexachlorocyclopentadiene	ug/L	N		2.3
88-06-2	2,4,6-Trichlorophenol.	ug/L	N		2.3
95-95-4	2,4,5-Trichlorophenol	ug/L	Ŋ		2.3
91-58-7	2-Chloronaphthalene.	ug/L		D 58.	2.3
88-74-4	2 Witmonilia	ug/L	N		2.3
131-11-3	2-Nitroaniline	ug/L	N		2.3
208-96-8	Dimethylphthalate	ug/L	N		2.3
606-20-2	Acenaphthylene	ug/L	N		2.3
99-09-2	2,6-Dinitrotoluene	ug/L	N		2.3
	3-Nitroaniline	ug/L	N	D 58	2.3
83-32-9 51-28-5	Acenaphthene	ug/L	N		2.3
	2,4-Dinitrophenol	ug/L	Ņ		2.3
100-02-7	4-Nitrophenol	ug/L	N		2.3
132-64-9	Dibenzofuran	ug/L	N		2.3
121-14-2	2,4-Dinitrotoluene	ug/L	N		2.3
84-66-2	Diethylphthalate	ug/L	N		2.3
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	N	D 12	2.3

KEMRON ENVIRONMENTAL SERVICES

ogin #L9810634 ovember 12, 1998 03:51 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9810634-01

Client Sample ID: WEIR 102998
Site/Work ID: 4119-007/PACOE PEDRICKTOWN
Matrix: Water % Solid: N/A Date Collected: 10/29/98

Method: 8270C\3510C Instrument: HPMS4 Run ID: R55716

CLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 17:35 Analyst: MLS Lab File ID: 12113 Batch : WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8	Fluorene. 4-Nitroaniline. 4,6-Dinitro-2-methylphenol. N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether. Hexachlorobenzene. Pentachlorophenol. Phenanthrene. Anthracene. Carbazole.	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	Result	ND ND ND ND ND ND ND ND ND ND	12 58 58 12 12 12 12 12 12 12 12	2.3 2.3 2.3 2.3 2.3
84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	Di-N-Butylphthalate. Fluoranthene. Pyrene. Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a) anthracene. Chrysene. bis(2-Ethylhexyl) phthalate. Di-n-octylphthalate. Benzo(b) fluoranthene. Benzo(k) fluoranthene. Benzo(a) pyrene. Indeno(1,2,3-cd) pyrene.	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		89999999999999999999999999999999999999	12 12 12 12 23 12 12 12 12 12 12	2.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3
53-70-3 191-24-2	Dibenzo(a,h) Anthracene Benzo(g,h,i) Perylene OGATES- In Percent Recovery: 2-Fluorophenol Phenol-d5. Nitrobenzene-d5. 2-Fluorobiphenyl 2,4,6-Tribromophenol p-Terphenyl-d14.	ug/L ug/L 34.1 23.3 52.9 56.5 91.9 108	((((ND ND 21 - 100%) 10 - 94%) 35 - 114%) 43 - 116%) 10 - 123%) 33 - 141%)	12 12	2.3 2.3

TCLP Extract Date: N/A Extract Date: N/A

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-01 Client Sample ID: WEIR 102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Analysis Date: 11/04/98 Time: 19:51

Date Collected: 10/29/98

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

Instrument: HPMS9

Method: 8260B Run ID: R55764

Analyst: SLT Lab File ID: 9VR00090

Batch : WG48847

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	/-			
74-83-9	Bromomethane	ug/L	ND	10	1
75-01-4	Vinyl chloride	ug/L	ND	10	1
75-00-3	Chloroethane	ug/L	ND	10	1
75-09-2	Methylene chloride	ug/L	ND	10	1
67-64-1	Acetone.	ug/L	ND	5.0	1
75-15-0	Carbon disulfide	ug/L	ND	10	1
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	1
67-66-3	Chloroform	ug/L	ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	1
78-93-3	2-Butanone	ug/L	ND	5.0	1
71-55-6	1,1,1-Trichloroethane	ug/L	ND	10	1
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	1
75-27-4	Bromodichloromethane	ug/L	ND	5.0	1
78-87-5	1,2-Dichloropropane.	ug/L	ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene.	ug/L	ND	5.0	1,
79-01-6	Trichloroethene	ug/L	ND	5.0	1
124-48-1	Dibromochloromethane	ug/L	ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L	ИD	5.0	1
71-43-2	Benzene	ug/L	йD	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	1
75-25-2	Bromoform	ug/L ug/L	ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L	ND	5.0	1
591-78-6	2-Hexanone	ug/L	ND	10	<u> </u>
127-18-4	Tetrachloroethene	ug/L	ND	10	<u> </u>
79-34-5	1,1,2,2-Tetrachloroethane		ND	5.0	1
108-88-3	Toluene	ug/L ug/L	ND	5.0	1
108-90-7	Chlorobenzene	ug/L ug/L	ND	5.0	1
100-41-4	Ethyl benzene	ug/L	ND	5.0	<u> </u>
100-42-5	Styrene	ug/L	ND	5.0	Ţ
1330-20-7	Xylenes, Total	ug/L ug/L	ND	5.0	Ţ
2330 20 .		ug/1	ND	5.0	1
SITER	OGATES- In Percent Recovery:				
	Dibromofluoromethane	99.1	(86 - 118%)		•
	1,2-Dichloroethane-d4	99.2	(80 - 120%)		
	Toluene-d8.	105) II =		
	p-Bromofluorobenzene	94.0	,		
	5	94.0	(86 - 115%)		

KEMRON ENVIRONMENTAL SERVICES

ogin #L9810634 ovember 12, 1998 03:51 pm

Lab Sample ID: L9810634-02 lient Sample ID: WEIR 102898 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 10/29/98 N/A

COC Info: N/A

\$555000

nalyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
otal Suspended Solids	mg/L	28		5.0	1,	N/A	DLP	11/02/98	12:00 160.2

Login #L9810 November 12, 1998 03:51 pm

KEMRON ENVIRON TAL SERVICES

Lab Sample ID: L9810634-03 Client Sample ID: WEIR 102798 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 10/29/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method	
Total Suspended Solids	mg/L	27		5.0	1	N/A	DLÞ	11/02/98	12:00 160.2	

KEMRON ENVIRONMENTAL SERVICES

ogin #L9810634 ovember 12, 1998 03:51 pm

Lab Sample ID: L9810634-04 lient Sample ID: BG202998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 10/29/98 N/A

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
yanide, Total	mg/L mg/L	46	ND	0.01 5.0	1	N/A N/A	SJM DLP	11/09/98 11/02/98	13:00 9010B\9014 12:00 160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-04 Client Sample ID: BG202998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

Date Collected: 10/29/98

Sample Weight: N/A Extract Volume: N/A

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Method: 8082\3510C Run ID: R55930

Instrument: HP4
Analyst: ECL
Lab File ID: 036R0101

Batch : WG48852

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260.	ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	70.0 67.0	(13 - 154%) (25 - 140%)		

ogin #L9810634 ovember 12, 1998 03:51 pm

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-04 Client Sample ID: BG202998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

% Solid: N/A Matrix: Water Date Collected: 10/29/98

Method: 8081A\3510C CLP Extract Date: N/A Instrument: HP9

Extract Date: 11/03/98
Analysis Date: 11/05/98 Time: Run ID: R55786 Analyst: ECL Lab File ID: 1256 Batch: WG48855

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1
319-85-7	beta-BHC	ug/L	ND	0.05	1
319-86-8	delta-BHC	ug/L	ND	0.05	1
58 - 89-9	gamma-BHC (Lindane)	uq/L	ND	0.05	1
76-44-8	Heptachlor	ug/L	ND	0.05	1
309-00-2	Aldrin	ug/L	ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	1
959-98-8	Endosulfan I	ug/L	ND	0.05	1
60-57-1	Dieldrin	ug/L	ND	0.10	1
72-55-9	4,4'-DDE	ug/L	ND	0.10	1
72-20-8	Endrin	ug/L	ND	0.10	1
33213-65-9	Endosulfan II	ug/L	ND	0.10	ļ
72-54-8	4,4'-DDD	ug/L	ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L	ND	0.10	<u>i</u>
50-29-3	4,4'-DDT	ug/L	ND	0.10	1
72-43-5	Methoxychlor	ug/L	ND	0.50	1
53494-70-5	Endrin ketone	ug/L	ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	1
5103-71-9	alpha Chlordane	ug/L	NĎ	0.05	1
5103-74-2	gamma Chlordane,	ug/L	ND	0.05	1
8001-35-2	Toxaphene	ug/L	ND	1.0	· 1
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	59.3	(13 - 154%)		
	Decachlorobiphenyl	64.0	(25 - 140%)		

L = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-04 Client Sample ID: BG202998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water Date Collected: 10/29/98 % Solid: N/A

Instrument: HPMS4 Method: 8270C\3510C Run ID: R55716 Analyst: MLS

TCLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 18:23 Lab File ID: 12114 Batch: WG48836

CAS #	Compound	Units	Result Qualifie	rs RL	Dilution	
108-95-2	Phenol	ug/L	170		-	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10	2	
95-57-8	4-Chiorophenol	ug/L	ND	10	2	
541-73-1	1,3~Dichioropenzene	ug/L	ND	10	2	
106-46-7	1.4-DlChlorobenzene	ug/L	ND	10	2	
95-50-1	1,2-Dichlorobenzene	ug/L	йD	10	2	
95-48-7	2-Methylbhenol	ug/L	ND	10	2	
108-60-1	DIS(4-UNIOTOISOPTOPVI)ether	ug/L	ND	10	2	
106-44-5		ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene		ND	10	2	
78-59-1	Isophorone.	ug/L	ND	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2.4-Dimethylphenol	ug/L	йD	10	2	
111-91-1	2,4-Dimethylphenol. Bis(2-Chloroethoxy)Methane	ug/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	йD	10	2	
91-20-3	Naphthalene	ug/L ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L ug/L	ND	10	2	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50 - 7	4-Chloro-3-methylphenol.	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND ND	10	2	
77-47-4	nexaciiorocyclopentadiene	ug/L	ND ND	10	2	
88-06-2	2.4.6-Trichloronhenol	ug/L	ND	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND ND	10	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	50	2	
88-74-4	2-Nitroaniline	ug/L	ND ND	10	2	
131-11-3	Dimethylphthalate	ug/L	ND	50	4	
208-96-8	Acenaphthylene	ug/L	ND ND	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND ND	10	4	
83-32-9	Acenaphthene	ug/L	ND ND	50	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	10	2	
100-02-7	4-Nitrophenol.	ug/L		50	2	
132-64-9	Dibenzofuran	ug/L	ND	50	2	
121-14-2	2,4-Dinitrotoluene		ND	10	2	
84-66-2	Diethylphthalate	ug/L ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether		ND	10	2	
	- one-openity - priority - conct	ug/L	ND	10	2	

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9810634-04 Client Sample ID: BG202998

Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Date Collected: 10/29/98 % Solid: N/A

Method: 8270C\3510C Instrument: HPMS4

'CLP Extract Date: N/A Extract Date: 11/02/98 Analysis Date: 11/03/98 Time: 18:23 Analyst: MLS Lab File ID: 12114 Run ID: R55716 Batch: WG48836

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-74-8 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-81-7 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5	Fluorene. 4-Nitroaniline. 4,6-Dinitro-2-methylphenol. N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether. Hexachlorobenzene. Pentachlorophenol. Phenanthrene. Anthracene. Carbazole. Di-N-Butylphthalate. Fluoranthene. Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a) anthracene. Chrysene. bis(2-Ethylhexyl)phthalate. Di-n-octylphthalate. Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene. Indeno(1,2,3-cd)pyrene.	Units Ug/L Ug/L	Result	Qualifiers ND	10 50 50 10 10 10 10 10 10 10 10 10 10 10 10	Dilution 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
53-70-3 191-24-2	Dibenzo(a,h) Anthracene. Benzo(g,h,i) Perylene.	ug/L		ND ND	10 10	2 2	
SURR	OGATES- In Percent Recovery: 2-Fluorophenol. Phenol-d5. Nitrobenzene-d5. 2-Fluorobiphenyl. 2,4,6-Tribromophenol. p-Terphenyl-d14.	32.6 22.0 55.1 59.2 68.7 99.8	()	21 - 100%) 10 - 94%) 35 - 114%) 43 - 116%) 10 - 123%) 33 - 141%)			

L = Reporting Limit

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-04 Client Sample ID: BG202998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Date Collected: 10/29/98

Dil. Type: N/A COC Info: N/A

Extract Volume: N/A

Sample Weight: N/A

% Solid: N/A ·

Instrument: HPMS9 Analyst: SLT Lab File ID: 9VR00113

Method: 8260B Run ID: R55830 Batch : WG48919

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/05/98 Time: 09:07

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
74-87-3	Chloromethane	/7				
74-83-9	Bromomethane	ug/L	ND	10	1	
75-01-4	Vinyl chloride.	ug/L	ND	10	1	
75-00-3	Chloroethane.	ug/L	ND	10	1	
75-09-2	Methylene chloride	ug/L	ЙD	10	1	
67-64-1	ACELONE	ug/L	ND	5.0	1	
75-15-0	Carbon disulfide	ug/L	йD	10	1	
75-35-4	1,1-Dichioroethene	ug/L ug/L	мD	5.0	<u>1</u>	
75-34-3	1,1-Dichiorograme	ug/L	иĎ	5.0	1	
540-59-0	1,2-Dichioroethene (Total)	ug/L	ND	5.0	1	
67-66-3	Chiorolorm	ug/L	ND	5.0	1	
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	<u>ı</u>	
78-93-3	2-Butanone	ug/L	ND	5.0	1	
71-55-6	1,1,1-Trichloroethane	ug/L	ND	10	1	
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	1	
75-27-4	bromodichioromethane	ug/L	ND ND	5.0	1	
78-87 - 5	1,2-Dichloropropane	ug/L		5.0	, 1	
10061-01-5	CIS-1,3-Dichioropropene	ug/L	ND	5.0	1	
79-01-6	Trichloroethene	ug/L	ND ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L	ND ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	ug/L		5.0	1	
71-43-2	Benzene	ug/L	ND ND	5.0 5.0	<u> </u>	
10061-02-6	trans-1,3-Dichioropropene	ug/L	ND	5.0	<u> </u>	
75-25-2	Bromoform.	ug/L	ND	5.0	,	
108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	1	
591-78-6	2-Hexanone	ug/L	ND	10	± -	
127-18-4	Tetrachloroethene	ug/L	ND	5.0	<u> </u>	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	Ţ	
108 - 88-3	Toluene	ug/L	ND ND		1	
108-90-7	Chlorobenzene	ug/L	ND ND	5.0	Ť	
100-41-4	Ethyl benzene	ug/L	ND	5.0 5.0	7	
100-42-5	Styrene	ug/L	ND ND		Ī	
1330-20-7	Xylenes, Total	ug/L	ND ND	5.0 5.0	1	
SURR	OGATES- In Percent Recovery:				-	
	Dibromofluoromethane	103	(06 1109)			
	1,2-Dichloroethane-d4	103	(86 - 118%) (80 - 120%)			
	Toluene-d8	101	,,			
	p-Bromofluorobenzene	91.7	(88 - 110%)			
		J1./	(86 - 115%)			

KEMRON ENVIRONMENTAL SERVICES

ogin #L9810634 ovember 12, 1998 03:51 pm

Lab Sample ID: L9810634-05 lient Sample ID: MIX102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 10/29/98 N/A

COC Info: N/A

nalyte	Units	Result	Qualifiers	RL	pil	Туре	Analyst	Analysis Date	Time	Method
yanide, Totalotal Suspended Solids	mg/L mg/L	380	ND	0.01	1 2	N/A N/A	SJM DLP	11/09/98 11/02/98	13:00 12:00	9010B\9014 160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9810634-05 Client Sample ID: MIX102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/29/98

% Solid: N/A

Method: 8082\3510C

Instrument: HP4
Analyst: ECL
Lab File ID: 037R0101

Run ID: R55930 Batch: WG48852

TCLP Extract Date: N/A
Extract Date: 11/03/98
Analysis Date: 11/05/98 Time:

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1
SURF	COGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	64.5 58.0	(13 - 154%) (25 - 140%)		

ogin #L9810634 ovember 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9810634-05 Client Sample ID: MIX102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/29/98 % Solid: N/A

Method: 8081A\3510C Instrument: HP9

CLP Extract Date: N/A Extract Date: 11/03/98 Analysis Date: 11/05/98 Time: Analyst: ECL Lab File ID: 1257 Run ID: R55786 Batch: WG48855

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1
319-85-7	beta-BHC	ug/L	ND	0.05	ī
319-86-8	delta-BHC	ug/L	ND	0.05	ī
58-89-9	gamma-BHC (Lindane)	uq/L	ND	0.05	ī
76-44-8	Heptachlor	ug/L	ND	0.05	1
309-00-2	Aldrin	ug/L	ND	0.05	ī
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	ī
959-98-8	Endosulfan I	uq/L	ND	0.05	1
60-57-1	Dieldrin	ug/L	ND	0.10	ī
72-55-9	4,4'-DDE	ug/L	ND	0.10	ī
72-20-8	Endrin	ug/L	ND	0.10	ī
33213-65-9	Endosulfan II	ug/L	ND	0.10	1
72-54-8	4.4'-DDD	ug/L	ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L	ND	0.10	1
50-29-3	4,4'-DDT	ug/L	ND	0.10	1
72-43-5	Methoxychlor	ug/L	ND	0.50	1 .
53494-70-5	Endrin ketone	ug/L	ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	1
5103-71-9	alpha Chlordane	ug/L	ND	0.05	1
5103-74-2	gamma Chlordane	ug/L	ND	0.05	1
8001-35-2	Toxaphene	ug/L	ND	1.0	` 1
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	59.6	(13 - 154%)		
	Decachlorobiphenyl	56.0	(25 - 140%)		

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9810634-05 Client Sample ID: MIX102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 19:12

Date Collected: 10/29/98

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

Dil. Type: N/A COC Info: N/A

Method: 8270C\3510C

Instrument: HPMS4
Analyst: MLS
Lab File ID: 12115 Run ID: R55716 Batch: WG48836

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10		
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10	2	
95 - 57-8	2-Chrorophenor,	ug/L	ND ND	10	2	
541-73-1	1.3-DlChlorobenzene	ug/L ug/L		10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	. 2	
95-50-1	1,2-Dichlorobenzene	ug/L ug/L	ND ND	10	2	
95-48-7	2-Methylphenol.	ug/L	#: -	10	2	
108-60-1	bis(2-Chloroisopropyl)ether.	ug/L	йD	10	2	
106-44-5	4-Methylphenol	ug/L	йD	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND ND	10	2	
67-72-1	Hexachloroethane	ug/L		10	2	
98-95-3	Nitrobenzene		ND	10	2	
78-59-1	Isophorone	ug/L ug/L	ND	10	2	
88-75-5	2-Nitrophenol		ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L ug/L	ND	10	2	
111-91-1	DIS(2-CRIOTOETROXVIMETHANE	ug/L ug/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	uq/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND ND	10	2	
91-20-3	Naphthalene	ug/L		10	2	
106-47-8	4-Chloroaniline	ug/L	ND ND	10	2	
87-68-3	Hexachlorobutadiene	na\r na\r	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10 10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L ug/L	ND		2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND ND	10	4	
91-58-7	2-Chloronaphthalene	ug/L		50	2	
88-74-4	2-Nitroaniline	ug/L	ND ND	10	2	
131-11-3	Dimethylphthalate	ug/L ug/L	ND ND	50	2	
208-96-8	Acenaphthylene	ug/L	ND ND	10	4	
606-20-2	2,6-Dinitrotoluene	na\r	_ · · _ · · _	10	4	
99-09-2	3-Nitroaniline	ug/L	ND	10	4	
83-32-9	Acenaphthene		йD	50	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	10	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	MD	50	2	
121-14-2	2,4-Dinitrotoluene	ug/L	иD	10	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2	
,005-,2-3	4-curorobusult_busult efust	ug/L	ND	10	2	

ogin #L9810634 ovember 12, 1998 03:51 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9810634-05 Client Sample ID: MIX102998

Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water % Solid: N/A Date Collected: 10/29/98

Method: 8270C\3510C CLP Extract Date: N/A Instrument: HPMS4

Run ID: R55716 Extract Date: 11/02/98
Analysis Date: 11/03/98 Time: 19:12 Analyst: MLS Batch : WG48836 Lab File ID: 12115

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-84-0 205-99-2 207-08-9 50-32-8 193-39-5 53-70-3	Fluorene. 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether Hexachlorobenzene Pentachlorophenol Phenanthrene Anthracene Carbazole Di-N-Butylphthalate Fluoranthene Pyrene Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a) anthracene Chrysene bis(2-Ethylhexyl) phthalate Di-n-octylphthalate Benzo(b) fluoranthene Benzo(a) pyrene Indeno(1,2,3-cd) pyrene Dibenzo(a, h) Anthracene	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L		10 50 50 10 10 10 10 10 10 10 10 10 10 10 10 10	222222222222222222222222222222222222222
191-24-2 SURE	Benzo(g,h,i)Perylene	31.6 21.4 53.0	(21 - 100%) (10 - 94%) (35 - 114%) (43 - 116%) (10 - 123%) (33 - 141%)		

⁻ Reporting Limit

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9810634-05 Client Sample ID: MIX102998 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 10/29/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: N/A Instrument: HPMS2 Method: 8260B Analyst: SLT Lab File ID: 2VR27383 Run ID: R55812 Analysis Date: 11/04/98 Time: 19:46 Batch : WG48883

74-87-3 Chloromethane ug/L ND 10 1 74-83-9 Bromomethane ug/L ND 10 1 75-01-4 Vinyl chloride ug/L ND 10 1 75-00-3 Chloroethane ug/L ND 10 1 75-00-3 Chloroethane ug/L ND 10 1	
74-83-9 Bromomethane	
75-01-4 Vityl chloride	
THE TENTE WE WE WE WE ARE A A A A A A A A A A A A A A A A A	
75-00-3 Chroroethane	
67-64-1 Acetone	
75-15-0 Carbon disulfide	
/5-35-4 1,1-Dichloroethene	
/5-34-3 1,1-Dichloroethane.	
54U-59-0 1,2-Dichloroethene (Total) 110/T. MD F 0 1	
67-66-3 Chloroform	
107-06-2 1,2-Dichloroethane ug/L ND 5.0 1	
78-93-3 2-Butanone	
71-55-6 1,1,1-Trichloroethane ug/L ND 5.0 1	
75-27-4 Bromodichloromethaneug/L ND 5.0 1	
78-87-5 1,2-Dichloropropane ug/L ND 5.0 1	
10061-01-5 cis-1,3-Dichloropropene ug/L ND 5.0 1	
79-01-6 Trichloroethene ug/L ND 5.0 1	
124-48-1 Dibromochloromethane ug/L ND 5.0 1	
79-00-5 1,1,2-Trichloroethane ug/L ND 5.0 1	
71-43-2 Benzeneug/L ND 5.0 1	
10061-02-6 trans-1,3-Dichloropropene ug/L ND 5.0 1	
75-25-2 Bromoform	
108-10-1 4-Methyl-2-pentanone ug/L ND 10 1	
591-78-6 2-Hexanone ug/L ND 10 1	
127-18-4 Tetrachloroethene ug/L ND 5.0 1	
79-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0 1	
108-88-3 Toluene ug/L ND 5.0 1	
108-90-7 Chlorobenzene	
100-41-4 Ethyl benzene	
100-42-5 Styrene ug/L ND 5.0 1	
1330-20-7 Xylenes, Total	
SURROGATES- In Percent Recovery:	
Dibromofluoromethane 95.0 (86 - 118%)	
1,2-Dichloroethane-d4 98.9 (80 - 120%)	
Toluene-d8	
p-Bromofluorobenzene	

Order #: 98-10-634 November 12, 1998 03:51 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

	Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
	WG48694	R55716	L9810634-01	Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	17:35	Extraction
İ	WG48694	R55716	L9810634-04	Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	18:23	Extraction
١	WG48694	R55716	L9810634-05	Water	TCL Semivolatiles	8270C\3510C	MLS	29-OCT-1998	03-NOV-1998	19:12	Extraction
	WG48766	R55786	L9810634-01	. Water	Organochlorine Pesticides	8081A\3510C	ECL	29-0CT-1998	05-NOV-1998		Extraction
I	WG48766	R55786	L9810634-04		Organochlorine Pesticides	8081A\3510C	ECL	29-0CT-1998	05-NOV-1998		Extraction
	WG48766	R55786	L9810634-05		Organochlorine Pesticides	8081A\3510C	ECL	29-0CT-1998	05-NOV-1998		Extraction
i	NO TO TO	K33700	D3070034-03	, waret	organochiorine rescrictues	00011/33100	004	23-004-1330	01 1.0V 1350		
	WG48767	R55930	L9810634-01	. Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
ı	WG48767	R55930	L9810634-04	Water	PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
	WG48767	R55930	L9810634-05		PCB's (Water)	8082\3510C	ECL	29-OCT-1998	05-NOV-1998		Extraction
ļ	WG48778	R55642	L9810634-01	. Water	Total Suspended Solids	160.2	DLP	29-0CT-1998	02-NOV-1998	12:00	Conventionals
	NG48778	R55642	L9810634-02		Total Suspended Solids	160.2	DLP	29-0CT-1998	02-NOV-1998		Conventionals
	#G48778	R55642	L9810634-03		Total Suspended Solids	160.2	DLP	29-0CT-1998	02-NOV-1998		Conventionals
	NG48778	R55642	L9810634-04		Total Suspended Solids	160.2	DLP	29-0CT-1998	02-NOV-1998		Conventionals
	AG48778	R55642	L9810634-05		Total Suspended Solids	160.2	DLP	29-0CT-1998	02-NOV-1998		Conventionals
i	MG40 / / 0	N33042	T201003402	Marci	local suspended sollos	100.2	22.	25 00- 2500			
	WG48836	R55716	L9810634-01	Water	TCL Semivolatiles	8270C\3510C	MLS	29-0CT-1998	03-NOV-1998	17:35	Semivolatile - GC/MS
1	WG48836	R55716	L9810634-04		TCL Semivolatiles	8270C\3510C	MLS	29-0CT-1998	03-NOV-1998	16:23	Semivolatile - GC/MS
	WG48836	R55716	L9810634-05		TCL Semivolatiles	8270C\3510C	MLS	29-0CT-1998	03-NOV-1998	19:12	Semivolatile - GC/MS
	4G48847	R55764	L9810634-01	Water	TCL Volatiles	8260B	SLT	29-OCT-1998	04-NOV-1998	19:51	Volatile - GC/MS
ı	4G48852	R55930	L9810634-01	Water	PCB's (Water)	8082\3510C	ECL	29-0CT-1998	05-NOV-1998		Semivolatile - GC
	NG48852	R55930	L9810634-04		PCB's (Water)	8082\3510C	ECL	29-0CT-1998	05-NOV-1998		Semivolatile - GC
	4G48852	R55930	L9810634-05		PCB's (Water)	8082\3510C	ECL	29-0CT-1998	05-NOV-1998		Semivolatile - GC
											Semivolatile - GC
,	¥G48855	R55786	L9810634-01	. Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998			
l '	#G48855	R55786	L9810634-04	Water	Organochlorine Pesticides	8081A\3510C	ECL	29-0CT-1998	05-NOV-1998		Semivolatile - GC
	#G48855	R55786	L9810634-05	Water	Organochlorine Pesticides	8081A\3510C	ECL	29-OCT-1998	05-NOV-1998		Semivolatile - GC
	4G48883	R55012	L9810634-05	. Water	TCL Volatiles	8260B	SLT	29-OCT-1998	04-NOV-1998	19:46	Volatile - GC/MS
	4G48919	R55830	L9810634-04	Water	TCL Volatiles	8260B	SLT	29-OCT-1998	05-NOV-1998	09:07	Volatile - GC/MS
	rG49143	R55960	L9810634-01	Water	Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals
	NG49143	R55960	L9810634-04		Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals
	4G49143	R55960	L9810634-05		Cyanide, Total	9010B\9014	SJM	29-OCT-1998	09-NOV-1998	13:00	Conventionals
	757727		2202024.03	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-1						

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC -- Ann L. Clark BAD -- Becky A. Diehl CEB -- Chad E. Barnes CDB -- Christy D. Burton CMS -- Crystal M. Stevens CRC -- Carla R. Cochran DIH -- Deanna I. Hesson DKM - Dewey K. Miller DLN -- Deanna L. Norton DIP -- Dorothy L. Payne ECL -- Eric C. Lawson FEH --Fay E. Harmon HV .. Hema Vilasagar Janice L. Holland JLH --JWR -- John W. Richards JYH -- Ji Y. Hu KHA - - Kim H. Archer KMS -- Kevin M. Stutler KRA - - Kathy R. Albertson MDA - - Mike D. Albertson

MDC -- Michael D. Cochran MES - Mary E. Schilling MLS -- Michael L. Schimmel MMB -- Maren M. Beery RDC -- Rebecca D. Cutlip RDS -- Rebecca D. Sutton REF -- Ron E. Fertile REK -- Robert E. Kyer RSS -- Regina S. Simmons RWC - Rodney W. Campbell SJK -- Sindy J. Kinney SJM -- Shawn J. Marshall SLP - Sheri L. Pfalzgraf SLT - Stephanie L. Tepe SMW - - Shauna M. Welch SPL -- Steve P. Learn TJW -- Thomas J. Ware TRS -- Todd R. Stack - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	fier Description	Qualifier	Description
(A) (B) (C) + < > B C	See the report narrative See the report narrative See the report narrative Correlation coefficient for the MSA is less than 0.995 Less than Greater than Present in the method blank Confirmed by GC/MS Surrogate or spike compound out of range	N NA ND NF NFL NI NR NS P	Tentatively Identified Compound (TIC) Not applicable Not detected at or above the reporting limit (RL) Not found No free liquid Non-ignitable Analyte is not required to be analyzed Not spiked Concentration > 25% difference between the two GC
CG D DL E F FL I J L	Confluent growth The analyte was quantified at a secondary dilution factor Surrogate or spike was diluted out Estimated concentration due to sample matrix interference Present below nominal reporting limit (AFCEE only) Free liquid Semiquantitative result, out of instrument calibration range Present below nominal reporting limit Sample reporting limits elevated due to matrix interference Duplicate injection precision not met	QNS R RA RE S SMI	columns Quantity not sufficient to perform analysis Analyte exceeds regulatory limit Reanalysis confirms reported results Reanalysis confirms sample matrix interference Analyzed by method of standard addition Sample matrix interference on surrogate Reported results are for spike compounds only Too numerous to count Analyzed for but not detected Post-digestion spike for furnace AA out of control limits Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264.

 AppendIX. They are not always achievable for every compound and the matrix dependent.

ORGANIC QA/QC



ANAL WORK GRP: WG48836

EXT DATE: 11/2/98

RUN DATE: 11/3/98 SMPL ID: NA

INSTRUMENT: HPMS4 ANALYST: MLS

METHOD: 8270 MATRIX: WATER

BENCH SHEET: V104P32

BLK FLNM: 12107

SMPL FLNM: NA

LCS FLNM: 12108

MS FLNM: NA

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG48694

MSD FLNM: NA

		CONCENTRATION , ug/L								PERCENT RECOVERY , %								PERCENT				BEYOND LIMITS		
			LCS SPIKE			MS SPIKE						LCS						MSD	RPD	RPD >	AMPLE	S KK		
ANALYTE	RDL	BLANK	ADDED	LCS	SAMPLE	ADDED	MS	MSD	BLANK	LCS	LCS LCL	UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	RPD	UCL	LIMIT	3	<u>}</u> 8	SN SS	
PYRIDINE	5.0	ND	100	24.9	ND	200	NA	NA	NA.	24.9	5	150	NA.	NA	NA	5	150	NA	40				30.00	
N-NITROSODIMETHYLAMINE	5.0	ND	100	33.4	ND	200	NA	NA	NA .	33,4	5	150	NA	NA.	NA	5	150	NA.	40			 		
ANILINE	10.0	ND	100	37. 6	ND	200	NA	NA NA	NA	37.6	5	150	NA	NA	NA	5	150	NA	40	200000000000000000000000000000000000000	1000		000000000000000000000000000000000000000	
PHENOL	5.0	ND	100	21.6	ND	200	NA .	NA	NA	21.6	5	112	NA	NA .	NA	5	112	NA .	40	Ţ				
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	47,4 ***********************************	ND	200	NA	NA NA	NA	47.4	12	158	NA	NA ***********	NA ***********	12	158 	NA	40 *********	: Raccelolikosoudo	233565	5300 4 3000	85-020-222	
2-CHLOROPHENOL 1.3-DICHLOROBENZENE	5.0	ND ND	100	44.7	ND	200	NA.	NA .	NA.	#4.7°	23	134	NA	NA	NA	23	134	NA .	40					
1.4-DICHLOROBENZENE	5.0 10.0	ND	100 100	41.9 43.7	ND ND	200 200	NA NA	NA MA	NA	41.9	5	172	NA	NA NA	NA	5 20	172 124	NA NA	40 40		202020		888080 0309	
BENZYL ALCOHOL	5.0	ND	100	44.5	ND	200	NA	NA NA	NA NA	43.7 44.5	20 5	124 150	NA NA	NA	NA NA	5	150	NA NA	40		188	200 1 00 1		
1.2-DICHLOROBENZENE	5.0	ND	100	44.5	ND.	200	NA .	NA	NA.	44.5	32	129	NA.	NA .	NA	32	129	l iù	40	::::::::::::::::::::::::::::::::::::::	333		1000 1000	
2-METHYLPHENOL	5.0	ND	100	44.9	ND	200	NA	NA	NA	44.9	5	150	NA	NA	NA	5	150	NA	40	i propinsi p	Parasa P	20000000400	page 200 page 200	
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND	100	47.7	ND	200	NA	NA NA	NA.	¥7.7	36	166	NA.	NA .	NA .	36	166	NA .	40		333	***		
3- & 4-METHYLPHENOL	5.0	i ND	100	41.2	ND	200	NA	NA	NA	41.2	5	150	NA	NA	NA	5 5	150	NA	40	000000000000000000000000000000000000000	2000000	20000 t 20000	00000	
N-NITROSO-DI-N-PROPYLAMINE		NO	100	51.1	ND	200	NA	NA.	NA	51.1	5	230	NA	NA	NA	5	230	NA .	40			@###		
HEXACHLOROETHANE	5.0	ND	100	44.2	ND	200	NA	NA	NA	44.2	40	113	NA	NA	NA	40	113	NA.	40	1				
NITROBENZENE	5.0	ND	100	50.9	ND	200	NA .	NA.	NA.	50.9	35	180	NA	NA .	NA	35	180	NA.	40	1				
ISOPHORONE	5.0	ND	100	55.1	ND	200	NA	NA	NA	55.1	21	196	NA	NA	NA	21	196	NA	40	1	ļ]			
2-NITROPHENOL	5.0	GN	100	51.6	ND.	200	NA .	NA .	NA	51.8	29	182	NA	NA .	NA	29	182	NA.	40					
2,4-DIMETHYLPHENOL	5.0	СИ	100	56.9	ND	200	NA	NA	NA	56.9	32	119	NA.	NA	NA	32	119	NA.	40		l		 	
BIS(2-CHLOROETHOXY)METHA	25.0	ND	100	47.7	ND	200	NA .	NA :	NA.	47.7	ુ33 ∵ં	184	NA	NA .	NA	33	184	NA.	40					
BENZOIC ACID	5.0	ND	100	0.0	ИD	200	NA	NA	NA	0.0	5	150	NA .	NA	NA	5	150	NA NA	40	0.400.000.000				
2,4-DICHLOROPHENOL	5.0	NO	100	49,2	ND	200	NA :	NA	NA .	49.2	39	135	NA	NA .	NA	39	135	NA .	40					
1,2,4-TRICHLOROBENZENE	5.0	ND	100	45.5	ND	200	NA	NA NA	NA.	45.5	44	142	NA	NA	NA.	44	142	NA.	40	A-05000000000000	227227	000000000000000000000000000000000000000	000000 00000	
NAPHTHALENE	5.0	DN	100	48.4	ND	200	NA	NA :	NA	48.4	21	133	NA	NA	NA	21	133	NA .	40					
4-CHLOROANILINE	5.0	ďИ	100	48.2	ND	200	NA	NA NA	NA	48,2	5	150	NA	NA	NA ***********	5	150	NA NA	40 	Stanton conti	100000	8000000		
HEXACHLOROBUTADIENE	10.0	an	100	47.1	NO	200	NA .	NA	NA	47.1	24	116	NA.	NA	NA	24	116	NA .	40					
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	53.0	ND	200	NA	NA (000 000 000 000 000 000 000 000 000 0	NA 2010/2010/2010/00/00	53.0	22	147	NA 8885:11 V 20000000	NA	NA	22	147 150	NA NA	40 40	300000000000000000000000000000000000000	99389	3000		
2-METHYLNAPHTHALENE	5.0	ND	100	48.A	ND	200	NA	NA	NA .	49.4	5	150	NA .	NA	NA .	5 5	150	NA NA	40		riiks)	**************************************		
HEXACHLOROCYCLOPENTADIE	5.0	ND	100	43.3	ND	200	NA	NA	NA	43,3	5 *************	150	NA	NA NA	NA NA	House become	144	NA.	40		1989	b	2388	
2.4.6-TRICHLOROPHENOL	25.0	VO.	100	50.9	ND	200	NA	NA .	NA.	50.9	37 5	144 150	NA NA	NA	NA	37 5	150	NA	40	(3.333.33.33)	0406040	*****************************	533333 (co.13	
2,4,5-TRICHLOROPHENOL	5.0	ND	100	53.5	ND	200	NA	NA NA	NA NA	53.5 49.1	60	118	NA NA	NA	NA.	60	118	NA.	40		388	antonio.	W 100	
2-CHLORONAPHTHALENE	25.0	ND	100	49.1	ND	200	NA .	NA NA	NA NA	53.2	5	150	NA NA	NA	NA	5	150	NA	888887 .8 888 40	1396600000	0.00000	200 (200)	40000000000	
2-NITROANILINE	5.0	GN GN	100 100	53.2 67.2	ND ND	200 200	NA NA	NA S	NA NA	67.2	5	112	NA S	NA.	NA.	5	112	NA .	40		188			
DIMETHYLPHTHALATE	5.0 5.0	ND	100	52.3	ND	200	NA	NA	NA	52.3	33	145	NA	NA	NA	33	იიაათა. 145	NA	40	Jasaa.	14000014		.000.000000	
ACENAPHTHYLENE 2.8-DINITROTOLUENE	5.0	ND	100	52.3 87.4⊗	ND ND	200	NA I		NA S	97.4	50 50	158	NA	NA	NA	50	158	NA.	40	les est		##		
3-NITROANILINE	25.0	ND	100	78.4	ND	200	NA	NA	NA NA	78.4	5	150	NA	NA	NA .) 5	150	NA NA	40	J	A 00001 1	- A - A - A - A - A - A - A - A - A - A		
ACENAPHTHENE	5.0	ND S	100	57.5	ND	200	NA	NA I	NA	857.5°	47	145	NA	NA .	NA	47	145	NA .	40					
2.4-DINITROPHENOL	25.0	ND	100	75.8	ND	200	NA	NA	NA	75.8	5	191	NA	NA	NA	5	191	NA	40					
4-NITROPHENOL	25.0	ND	100	53.8	ND	200	NA .	NA.	NA	53.8	5	132	NA	NA	NA .	5	132	NA.	40					
DIBENZOFURAN	5.0	ND	100	57.0	ND	200	NA	NA	NA	57.0	5	150	NA	NA	NA	5	150	NA	40					
2.4-DINITROTOLUENE	5.0	ND	100	97.4	ND	200	NA	NA 🌣	NA .	97.4	39	139	NA NA	NA _	NA	39	139	NA	40					

NOTES & DEFINITION NA = NOT APPLICABLE NS = NOT SPIKED L= below QC limit ----



KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG48836

EXT DATE: 11/2/98

RUN DATE: 11/3/98

INSTRUMENT: HPMS4 ANALYST: MLS

METHOD: 8270

BENCH SHEET: V104P32

SMPL ID: NA

MATRIX: WATER CONCENTRATION UNITS: UGAL

BLK FLNM: 12107

SMPL FLNM: NA

LCS FLNM: 12108

MS FLNM : NA

PREP WORK GRP: WG48694

MSD FLNM: NA

		·		CONCE	ITRATION	, ug/L				"		PERCEI	NT RECOVE	RY , %			د در		PERCE	NT		BEY!	
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	_ MS UC	MSD RPD	RPD UCL	BEYON D RPD LIMIT	SAMPLE	BLANK SS	S S
DIETHYLPHTHALATE	5.0	ND	100	84.5	ND	200	NA	NA	NA	84.5	5	114	NA	NA	NA	5	114	NA	40				T
FLUORENE	5.0	ND.	100	63.9	ND	200	NA .	NA.	NA .	63.9	25	158	NA .	NA .	NA	25	158	NA .	40				
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	59.5	ND	200	NA	NA	NA.	59.5	59	121	NA	NA	NA	59	121	NA	40	1			. []
4-NITROANILINE	25,0	ND	100	78.4	NO.	200	NA .	NA	NA	78.4	5	150	NA .	NA	NA.	5	150	NA.	40	8.000			
1,2-DIPHENYLHYDRAZINE *	5.0	DN	100	56.1	ND	200	NA.	NA	NA	56.1	5	150	NA	NA	NA	5	150	NA	40	1			
4,6-DINITRO-2-METHYLPHENOL	25.0	שמא	100	95.5	ND	200	NA.	NA .	NA.	95.5		181	NA	NA	NA.	5	181	NA	40				
N-NITROSODIPHENYLAMINE **	5.0	GN	100	76.6	ND	200	NA	NA	NA	76.6	5	150	NA	NA	NA	5	150	NA	40				
4-BROMOPHENYL-PHENYL ETH	5.0	aи	100	63.9	ND	200	NA	NA	NA	63.9	53	127	NA	NA	NA	53	127	NA.	40				
HEXACHLOROBENZENE	5.0	ND	100	86.9	ND	200	NA	NA	NA.	86.9	5	152	NA	NA	NA	5	152	NA	40				
PENTACHLOROPHENOL	25.0	ND .	100	91.6	ND	200	NA .	NA.	NA	81.6	14	176	NA	NA .	NA	14	176	NA.	40				
PHENANTHRENE	5.0	ND	100	85.6	ND	200	NA	NA	NA	85.6	54	120	NA.	NA	NA	54	120	NA	40		l		
ANTHRACENE	5.0	ND .	100	88.2	NO	200	NA	NA	NA	88.2	27	133	NA	NA	NA	27	133	NA	40			*	
CARBAZOLE	5.0	ND	100	85.7	ND	200	NA	NA	NA	85.7	5	150	NA	NA	NA	5	150	NA	40	1	I]		
DI-N-BUTYLPHTHALATE	5.0	ND	100	81.4	ND	200	NA	NA	NA.	81.4	To Company	118	NA.	NA .	NA	100	118	NA.	40				
FLUORANTHENE	5.0	ND	100	102.4	ND	200	NA	NA	NA	102.4	26	137	NA	NA	NA	26	137	NA	40	l	l1		
PYRENE	5.0	ND.	100	98.2	ND	200	NA	NA	NA	98.2	52	115	NA	NA	NA	52	115	NA.	40				
BUTYLBENZYLPHTHALATE	5,0	ND	100	108.9	ND	200	NA	NA	NA	108.9	5	152	NA	NA	NA	5	152	NA	40				.
BENZO(A)ANTHRACENE	10.0	ND	100	98.7	ND	200	NA	NA	NA	98.7	5	262	NA	NA	NA	5	262	NA	40				
3,3'-DICHLOROBENZIDINE	5,0	I ND	100	95.2	ND	200	NA	NA	NA	95,2	33	143	NA	NA	NA	33	143	NA	40				
CHRYSENE	5.0	MD	100	99.2	ND	200	NA .	NA	NA .	99.2	17	168	NA.	NA .	NA	17	168	NA	40				
BIS(2-ETHYLHEXYL)PHTHALATE		ND	100	107.4	ND	200	NA	NA	NA	107.4	8	158	NA	NA	NA	8	158	NA	40	1			
DI-N-OCTYLPHTHALATE	5.0	ND	100	112.7	ND	200	NA	NA	NA .	112.7		146	NA .	NA	NA	4	146	NA	40				
BENZOIBIFLUORANTHENE	5.0	ND	100	110.9	ND	200	NA	NA	NA	110.9	24	159	NA	NA	NA	24	159	NA.	40				
BENZO[K]FLUORANTHENE	5.0	ON.	100	116.6	ND	200	NA	NA:	NA	116.6	(1	182	NA	NA	NA	111	162	NA	40				
BENZOJAJPYRENE	5.0	ND	100	114.4	ND	200	NA	**************************************	NA	114.4	17	163	NA	NA	NA	17	163	NA	40				
INDENO[1.2.3-CD]PYRENE	S.0	ND.	100	108.0	ND	200	NA .	NA.	NA.	108.0	5	171	NA	NA	NA	[5	171	NA.	40				
DIBENZIA HIANTHRACENE	5.0	ND	100	. 117.9	ND	200	NA	NA	NA	117.9	5	227	NA NA	NA	NA	5	227	NA	40				
BENZOIG H.IJPERYLENE	5.0	ND.	100	110.6	ND	200	NA	NA	NA.	110,8	5	219	NA	NA	NA	5	219	NA .	40				
SURROGATES										_		=						<u> </u>	- to the second				\biguplus
2-FLUOROPHENOL		32.1	100	32.2	NA	100	NA	NA	32.1	32.2	21	100	NA	NA	NA	21	100		40000000000000000000000000000000000000	ecoanos abanes		2224 (23)	danda.
PHENOL - D5		21.3	100	21.9	NA	100	NA .	NA	21.3	21.9	10	94	NA	NA .	NA	10	94						400)
NITROBENZENE - D5		26.9	50	26.0	NA	50	NA	NA	53.7	52.0	35	114	NA	NA	NA	35	114		and pageones such	00000 200000 2511	20000	9000 PS P	30 2000 1000
2-FLUOROBIPHENYU		26.5	50	26.4	NA	50	NA	NA	52.9	52.8	43	116	NA	NA	NA	43	116						400
2,4,6-TRIBROMOPHENOL	onnecces	60.5	100	93.2	NA NA	100	NA	NA	60.5	93.2	10	123	NA.	NA	NA	10	123		vacaar sacassa sa	NO 80NG 2002200	1000000	3000 0000	
D-TERPHENYL - 014		63.7	50	60.7	NA	50	NA	NA	127.3	121.3	33	141	NA	NA	NA	33	141	0000000			\$100 B		4000

NOTES & DEFINITIONS :

NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48847

Run Date: 11/4/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Matrix: Water Instrument ID: HPMS 9 BLK FLNM: 9BK00073

SMPL Num: 10-505-01 SMPL FLNM: 9RU00078 SMPL DF:

Units: ug/L

BLK2 FLNM:

MS FLNM: 9RU00079

MS DF: MSD DF: 1

LCS FLNM: 90C00074

NA

MSD FLNM: 9RU00080

						ONCENTRA	TION, PPB) <u> </u>						PERCE	NT REC	OVERY			PERCEN	IT RPD
						LCS Spike				MS Spike			LCS	LCS		•	MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	սց/Լ	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
lichlorodifluoromethane	10.0	ND	ND	13.3	NA	20.0	NO	13.3	12.9	20.0	66.5	NA	38.0	148.0	66.5	64.5	60.0	140.0	3.1	20.0
chloromethane	10.0	ND	ND	17.2	NA	20.0	ND	14.5	14.6	20.0	86.0	NA	56.0	132.0	72.5	73.0	D	273.0	0.7	20.0
vinyl chlorida	10.0	ND	ND	20.7	NA	20.0	ND	17.0	16.9	20.0	103.5	NA.	68.0	125.0	85.0	84.5	D	251.0	0.6	20.0
bromomethane	10.0	ND	ND	22.6	NA	20.0	ND	11.7	13.5	20.0	113.0	NA	55.0	138.0	58.5	67.5	D	242.0	14.3	20.0
chlorosthane	10.0	ND	ND	18.8	NA	20.0	ND	19.3	18,7	20.0	94.0	NA	70.0	128.0	96.5	93.5	14.0	230.0	3.2	20.0
trichlorofluoromathana	10.0	ND	ND	19.6	NA	20.0	ND	20.7	20.4	20.0	98.0	NA	70.0	127.0	103.5	102.0	17.0	181.0	1.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ON	NA	NA	20.0	NA	NA	NA	NA .	NA .	NA:	70.0	130.0	NA	20.0
' acetone	100.0	ND	ND	16.3	NA	20.0	ND	17.4	15.8	20.0	81.5	NA	44.0	114.0	87.0	79.0	70.0	130.0	9.6	20.0
1,1-dichlorosthene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	21.7	20.0	106.5	NA.	69.0	144.0	109.5	108.5	D	234.0	0.9	20.0
iodomethane	NTC	ND	ND	20.5	NA	20.0	ND	13.2	16.8	20.0	102.5	NA	NA	NA	66.0	84.0	70.0	130.0	24.0	20.0
methylens chloride	5.0	ND	AD	21.0	NA	20.0	ND	21.7	21,2	20.0	105.0	NA	71.0	128.0	108.5	106.0	D	221.0	2.3	20.0
carbon disulfide	5.0	ND	ND	19.9	NA	20.0	ND	20.6	20.4	20.0	99.5	NA	67.0	136.0	103.0	102.0	70.0	130.0	1.0	20.0
acrylonitrile	NTC	ND	ND	NA.	NA	20.0	NO	NA.	NA	20.0	NA:	NA.	NA	NA	NA .	NA.	70.0	130.0	NA .	20.0
rans-1,2-dichloroethene	5.0	ND	ND	23.2	NA	20.0	ND	23.6	23.2	20.0	116.0	NA	85.0	133.0	118.0	116.0	54.0	156.0	1.7	20.0
Vinyl Scatate	10.0	NO	ND	18.1	NA	20.0	ND	19.8	18.6	20.0	90.6	NA	9.0	236.0	99.0	92.5	9.0	236.0	6.8	20.0
1,1-dichloroethane	5.0	ND	ND	21.4	NA	20.0	ND	21.9	21.6	20.0	107.0	NA	82.0	124.0	109.5	108.0	59.0	155.0	1.4	20.0
2-butanone	100.0	ND	ND	18.5	NA	20.0	ND	19.4	17.3	20.0	92.5	NA	43.0	140.0	97.0	86.5	70.0	130.0	11.4	20.0
2,2-dichloropropane	5.0	ND	ND	22.0	NA	20.0	ND	22.6	22.3	20.0	110.0	NA	77.0	126.0	113.0	111.5	60.0	140.0	1.3	20.0
cis-1,2-dichtorgethene	5.0	ND	ND	20.7	NA	20.0	ND	21.0	20.8	20.0	103.5	NA	69.0	130.0	105.0	104.0	60.D	140.0	1.0	20.0
chloroform	5.0	ND	ND	21.5	NA	20.0	ND	21.8	21.6	20.0	107.5	NA	83.0	121.0	109.0	108.0	51.0	138.0	0.9	20.0

tes and Definitions:

L = Reporting Detection Limit

ND = Not Detected NA = Not Applicable

< = Method Blank</p>

(2 = Second Method Blank

S = Laboratory Control Sample

S2 = Second Laboratory Control Sample

IPL = Sample Results

i/MSD = Matrix Spike / Matrix Spike Duplicate

L = Lower Control Limit

L = Upper Control Limit

D = Relative Percent Difference

8260

Workgroup #: WG48847

Method:

Run Date: 11/4/98

LC\$2 FLNM: NA LCS DF:

8260A

Instrument ID: HPMS_9

SMPL Num: 10-505-01

SMPL DF:

Matrix: Water Units:

ug/L

BLK FLNM: 98K00073

SMPL FLNM: 9RU00078

MS DF:

BLK2 FLNM: NA MS FLNM: 9RU00079

MSD DF:

LCS FLNM: 9QC00074

MSD FLNM: 9RU00080

			.,			CONCENTRA	TION, PPE							PERC	ENT REC	OVERY			PERCE	NT RPO
						LCS Spike	1			MS Spike	1		LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	
bromochloromethane	5.0	ND	NĐ	21.6	NA	20.0	ND	22.1	21.4	20.0	108.0	NA	85.0	118.0	110.5	107.0	60.0	140.0	3.2	20,0
1,1,1-trichigroethans	5.0	ND	ND	21.4	NA	20.0	ND	21.8	21.6	20.0	107.0	NA	74.0	125.0	109.0	108.0	52.0	162.0	0.9	20.0
1,1-dichloropropene	5.0	ND	ND	23.4	NA	20.0	ND	24.1	23.8	20.0	117.0	NA .	85.O	126.0	120.5	119.0	60.0	140.0	1.3	20.0
carbon tetrachloride	5.0	ND	ND	22.0	NA	20.0	ДŅ	23.0	22.4	20.0	110.0	NA	73.0	129.0	115.0	112.0	70.0	140.0	2.6	20.0
1,2-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.1	20.8	20.0	105.0	NA	76.0	123.0	105.5	104.0	49.0	155.0	1.4	20.0
benzane	5.0	ND	ND	21.3	NA	20.0	ND	21.4	21.0	20.0	106.5	NA	86.0	119.0	107.0	105.0	37.0	151.0	1.9	20.0
trichloroethene	5.0	ND	ND	21.5	NA	20.0	ND	21.3	21.2	20.0	107.5	NA	82.0	120.0	106.5	106.0	71.0	157.0	0.5	20.0
1,2-dichloropropane	5.0	ND	ND	21,1	NA .	20.0	Ode	21.3	21.0	20.0	105.5	NA	74.0	126.0	106.5	105.0	D	210.0	1.4	20.0
bromodichloromethane	5.0	ND	ND	22.0	NA	20.0	ND	22.2	21.8	20.0	110.0	NA	74.0	126.0	111.0	109.0	35.0	155.0	1.8	20.0
ditromomethane	5,0	ND	ND	21.1	NA	20.0	ND	21.6	21.0	20.0	105.5	NA	78.0	125.0	108.0	105.0	60.0	140.0	2.8	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.5	NA	20.0	ND	ND	ND	20.0	97.5	NA	68.0	144.0	NA	NA	70.0	130.0	NA	20.0
4-methyl-2-pentanone	10.0	ND .	סאו	18.9	NA	20.0	NO	19.9	18.0	20.0	94.5	NA	70.0	127.0	99.5	90.0	70.0	130.0	10.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	22.1	NA	20.0	ND	22.2	22.0	20.0	110.5	NA	77.0	123.0	1110	110.0	D	227.0	0.9	20.0
toluene	5.0	ND	IND	21.5	NA	20.0	ND	21.8	21.6	20.0	107.5	NA NA	83.0	119.0	108.0	108.0	47.0	150.C	0.0	20.0
trans-1,3-dichtoropropene	5.0	ND	ND	21.7	NA	20.0	ND	21.5	20.8	20.0	108.5	NA	74.0	124.0	107.5	104.0	17.0	183.0	3.3	20.0
1,1,2-trichloroethane	5.0	ND	IND	21.1	NA	20.0	ND	21.0	20.B	20.0	105.5	NA .	72.0	119.0	105.0	103.0	52.0	150.0	1.9	20.0
2-hexanone	10.0	ND	ND	18.5	NA	20.0	ND	19.2	17.7	000000000000000000000000000000000000000	100000000000000000000000000000000000000	A0000000000000000000000000000000000000	30000000000000	88448648645666		প্রকরণে করের ক্রেডর	and and the same of the same o	80, 14 0 TH F (\$1 TH)		000000000000000000000000000000000000000
1,3-dichloropropane	300000000000000000000000000000000000000	980870903080	88866896686	1994 (2019) 1994	8038979888889888	90000900000000000000000000000000000000	9888796 937 9376	6193475296185333	nachters Feter teasts	20.0	92.5	NA	55.0	114.0	98.0	88 .5	70.0	130.0	8.1	20.0
	5.0	ND	ND	20.9	NA	20.0	ND	21.0	20.5	20.0	104.5	NA	73.0	122.0	105.0	102.5	60.0	140.0	2.4	20.0
tetrachloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.2	21.1	20.0	108.0	NA	82.0	120.0	106.0	105.5	64.0	148.0	0.5	20.0
dibromochloromethane	5.0	ND	ND	21.7	NA	20:0	ND	21.6	21.3	20.0	108.5	NA	72.0	121.0	108.0	106.5	53.0	149.0	1.4	20.0

lotes and Definitions:

IDL = Reporting Detection Limit

ND = Not Detected

3LK = Method Blank

NA = Not Applicable

ILK2 = Second Method Blank

.CS = Laboratory Control Sample

.CS2 = Second Laboratory Control Sample

IMPL = Sample Results

AS/MSD = Matrix Spike / Matrix Spike Duplicate

.CL = Lower Control Limit

JCL = Upper Control Limit

RPD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48847

Run Date: 11/4/98

LCS2 FLNM: NΑ LCS DF:

Method: 8260A

Instrument ID: HPMS_9 BLK FLNM: 9BK00073 SMPL Num: 10-505-01

SMPL DF:

Matrix: Water

SMPL FLNM: 9RU00078

MS DF:

Units:

ug/L

BLK2 FLNM: NA MS FLNM: 9RU00079

MSD DF:

LCS FLNM: 9QC00074

MSD FLNM: 9RU00080

					C	ONCENTRA	TION, PPB							PERCE	NT RECO	OVERY			PERCEN	IT RPD
						LCS Spike			•	MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL_	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/l.	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	21.1	NA	20.0	ND	21.6	20.7	20.0	105.5	NA	75.0	121.0	108.0	103.5	60.0	140.0	4.3	20.0
chlarobenzene	5.0	ND	ND	21.2	NA	20.0	ND	20,9	20.9	20.0	106,0	NA	83.0	120.0	104.5	104.5	37.0	160,0	0.0	20.0
,1,1,2-tetrachloroethane	5.0	ND	ND	21.7	NA	20.0	ND	21.3	21.3	20.0	108.5	NA	79.0	118.0	106.5	106.5	60.0	140.0	0.0	20.0
ethylbenzene	5.0	ND	ND	21.5	NA.	20.0	ND	21,2	20.9	20.0	107.5	NA	82.0	119.0	106.0	104.5	37.0	162.0	1.4	20.0
m+p-xylene	5.0	ND	ND	43.0	NA	40.0	ND	42.0	42.2	40.0	107.5	NA	81.0	121.0	105.0	105.5	60.0	140.0	0.5	20.0
o-xylene	5.0	ND	ND	21,5	NA	20.0	ND	21.1	20.9	20,0	107.5	NA	81.0	199.0	105.5	104,5	60.0	140.0	1.0	20,0
styrene	5.0	ND	ND	21.8	NA	20.0	ND	21.2	21.2	20.0	109.0	NA	81.0	118.0	106.0	106.0	60.0	140.0	0.0	20.0
bromoform	5.0	ND	ND	16.3	NA	20.0	ND	16.1	15,3	20.0	81.5	NA	68.0	129.0	80.5	76.5	45.0	169.0	5.1	20.0
isopropylbenzene	5.0	ND	ND	21.5	NA	20.0	ND	21.1	20.8	20.0	107.5	NA	81.0	121.0	105.5	104.0	60.0	140.0	1.4	20.0
.1,2,2-tetrachioroethane	5.0	ND	ND	20.8	NA	20.0	ND	21.8	20.7	20.0	104.0	NA	61.0	137.0	109.0	103.5	46.0	157.0	5.2	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.0	NA	20.0	ND	22.0	21.0	20.0	105.0	NA	72.0	130.0	110.0	105.0	60.0	140.0	4.7	20.0
ins-1,4-dichloro-2-butens	NTC	ND	ND	NA	NA	20.0	ND:	NA	NA	20,0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	22.0	20.0	106.5	NA	69.0	135.0	109.5	110.0	60.0	140.0	0.5	20.0
bromobenzene	5.0	ND	ND	21.2	NA	20.0	ND.	21.1	21.1	20,0	106.0	NA	86.0	118.0	105,5	105.5	60.0	140.0	0.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	ND	21.9	21.9	20.0	106.5	NA	83.0	121.0	109.5	109.5	60.0	140.0	0.0	20.0
2-chlorotoluene	5.0	ND	ND	23.3	NA	20.0	ND	23.3	22.3	20.0	116.5	NA	80.0	126.0	116.5	111.5	60.0	140.0	4.4	20.0
4-chlorotoluene	5.0	ND	ND	19.6	NA	20.0	ND	19.8	20.9	20.0	98.0	NA	80.0	125.0	99.0	104.5	60.0	140.0	5.4	20.0
tert-butyl-benzene	5.0	ND	ND	21,7	NA	20.0	ND	22.1	22.1	20.0	108.5	NA	79.0	114.0	110.5	110.5	60,0	140.0	0.0	20,0
1,2,4-trimethylbenzene	5.0	ND	ND	21,3	NA	20.0	ND	21.6	21.7	20.0	106.5	NA	84.0	121.0	108.0	108.5	60.0	140.0	0.5	20.0
sec-butyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	20,8	20.8	20.0	104.0	NA	81.0	122.0	104.0	104.0	60.0	140.0	0,0	20.0

tes and Definitions:

L = Reporting Detection Limit

ND = Not Detected

(= Method Blank

NA = Not Applicable

(2 = Second Method Blank

3 = Laboratory Control Sample

32 = Second Laboratory Control Sample

IPL = Sample Results

i/MSD = Matrix Spike / Matrix Spike Duplicate

L = Lower Control Limit

L = Upper Control Limit

Workgroup #: WG48847

Run Date: 11/4/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Instrument ID: HPMS 9

SMPL Num: 10-505-01

SMPL DF:

Matrix: Water BLK FLNM: 98K00073

SMPL FLNM: 9RU00078

Units:

ug/L

BLK2 FLNM: NA MS FLNM: 9RU00079

MS DF:

LCS FLNM: 9QC00074

MSD FLNM: 9RU00080

MSD DF:

					(CONCENTRA	TION, PPB						· ·	PERC	NT REC	OVERY			PERCE	NT RPD
]					LCS Spike		•	_	MS Spike			LCS	LCS			MS	MS	MS	RPO
	RDL	BLK	BLK2	LCS	LCS2	Løvel	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.4	NA	20.0	ND	20.7	20.7	20.0	102.0	NA	80.0	119.0	103.5	103.5	60.0	140.0	0.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.0	NA	20.0	DM	20.7	20.8	20.0	105.0	NA	85.0	#19.0	103.5	104.0	60.0	140.0	0.5	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	20.4	20.4	20.0	102.0	NA	82.0	122.0	102.0	102.0	18.0	190.0	0.0	20.0
n-butyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	21.2	21.3	20.0	105.0	NA	0.08	125.0	108.0	108.5	60.0	140.0	0.5	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.8	20.7	20.0	105.5	NA	86.0	119.0	104.0	103.5	19.0	190.0	0.5	20.0
,2-dibromo-3-chloropropane	5.0	ND	ND	17.1	NA	20.0	ND:	18,3	17.0	20,0	85.5	NA .	66.0	134.0	91.5	85.O	60.0	140.0	7.4	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20.5	NA	20.0	ND	20.4	20.6	20.0	102,5	NA	78.0	122.0	102.0	103.0	60.0	140.0	1.0	20.0
hexachlorobutadiene	5.0	ND	ND	20.3	NA	20.0	ND	20:4	20.0	20.0	101.5	NA	73.0	125.0	102.0	100.0	60.0	140.0	2.0	20.0
парthalene	10.0	ND	ND	19.4	NA	20.0	ND	23.1	21.9	20.0	97.0	NA	74.0	148.0	115.5	109.5	60.0	140.0	5.3	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	20.6	20.2	20.0	101.0	NA	74.0	124.0	103.0	101.0	60.0	140.0	2.0	20.0

ILK2 = Second Method Blank

CS = Laboratory Control Sample

CS2 = Second Laboratory Control Sample

:MPL = Sample Results

AS/MSD = Matrix Spike / Matrix Spike Duplicate

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

CL = Lower Control Limit

ICL = Upper Control Limit

:PD = Relative Percent Difference

Workgroup #: WG48883

Units:

Method: 8260A

Run Date: 11/4/98

Instrument ID: HPMS_2

LCS2 FLNM: NA LCS DF:

Matrix:

Water ug/L

BLK FLNM: 28K27367

SMPL Num: 10-433-16 SMPL FLNM: 28F27372 SMPL DF: 10

BLK2 FLNM: NA MS FLNM: 2BF27373.D

MS DF: 10 MSD DF: 10

LCS FLNM: 2QC27368.D MSD FLNM: 28F27374.D

	ļ					ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCE	NT RPD
	1					LCS Spike				MS Spike			LCS	LCS		-	MS	MS	мѕ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethans	10.0	NO	ND	13.3	NA	20.0	ND	14,2	12.8	20.0	66.5	NA	38.0	148.0	71.2	64.1	60.0	140.0	10.5	20:0
chloromethane	10.0	ND	ND	14.5	NA	20.0	ND	15.3	13.9	20.0	72.7	NA	56.0	132.0	76.6	69.7	D	273.0	9.4	20.0
vinyl chlorida	10.0	NO	ND	15.7	NA	20.0	ND	17.1	15.7	20.0	78.3	NA	68.0	125.0	85.8	78.6	Ø	251.0	8.5	20.0
bromomethane	10.0	ND	ND	21.9	NA	20.0	ND	21.1	20.8	20.0	109.4	NA	55.0	138.0	105.7	104.0	D	242.0	1.6	20.0
chloroethane	10.0	NO	ND	17.7	NA	20.0	ND.	19.5	17,5	20.0	88.7	NA	70.0	128.0	97.6	87.3	14.0	230.0	11,1	20.0
trichlorofluoromethane	10.0	ND	ND	19.4	NA	20.0	ND	20.5	18.2	20.0	97.1	NA	70.0	127.0	102.3	91.0	17.0	181.0	11.6	20.0
freon 113	NTC	NO	ND .	NA :	NA	20.0	ND	NA	NA	20.0	NA ·	NA	NA	NA :	NA	NA .	70.0	130,0	NA	20.0
acetone	100.0	ND	ND	12.7	NA	20.0	ND	15.9	12.7	20.0	63.7	NA	44.0	114.0	79.5	63.7	70.0	130.0	22.1	20.0
1,1-dichlorosthene	5.0	ND	ND	18.9	NA	20.0	DN	- 20.1	18.2	20.0	94.5	NA	69.0	144.0	100.4	8.08	Ð	234.0	10.0	20.0
iodomethane	NTC	ND	ND	19.2	NA	20.0	ND	22.7	21.2	20.0	95.8	NA	NA	NA	113.5	105.8	70.0	130.0	7.0	20.0
methylana chlorida	5.0	NO	ND	17.7	NA:	20.0	20.5	84.6	53.9	20.0	88.3	NA	71.0	128.0	320.5	166.9	D	221.0	44.4	20.0
carbon disulfide	5.0	ND	ND	20.5	NA	20.0	ND	21.2	20.6	20.0	102.6	NA	67.0	136.0	106.1	103.1	70.0	130.0	2.9	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA .	NA	NA	NA :	NA	NA	70.0	130.0	NA	20.0
rans-1,2-dichloroethene	5.0	ND	ND	22.6	NA	20.0	ND	22.2	21.6	20.0	113.1	NA	85.0	133.0	111.0	108.2	54.0	156.0	2.6	20.0
vinyl acetate	10.0	ND	ND	18.5	NA	20.0	ND	17.4	18.3	20.0	92.4	NA	9.0	236.0	87.2	91,4	9.0	236.0	4.8	20.0
1,1-dichloroethane	5.0	ND	ND	21.7	NA	20.0	ND	20.6	21.3	20.0	108,4	NA	82.0	124.0	102.9	106.4	59.0	155.0	3.4	20.0
2-butanone	100.0	ND	ND :	15.9	NA	20.0	ND	15.6	16.3	20.0	79.4	NA .	43.0	140.0	77.8	81.7	70.0	130.0	4,9	20.0
2,2-dichloropropane	5.0	ND	ND	20.5	NA	20.0	ND	20.6	19.3	20.0	102.5	NA	77.0	126.0	103.0	96.3	60.0	140.0	6.7	20.0
cis-1,2-dichlorgethene	5,0	ND.	ND	20.4	NA	20.0	ND	20.3	19.7	20.0	102.0	NA	69.0	130.0	101.6	98,6	60.0	140,0	3.0	20.0
chloroform	5.0	ND	ND	20.7	NA	20.0	ND	20.8	20.3	20.0	103.6	NA	83.0	121.0	103.9	101.7	51.0	138.0	2.1	20.0

es and Definitions:

. = Reporting Detection Limit

ND = Not Detected NA = Not Applicable

:= Method Blank

(2 = Second Method Blank

3= Laboratory Control Sample

32 = Second Laboratory Control Sample

PL = Sample Results

/MSD = Matrix Spike / Matrix Spike Duplicate

_= Lower Control Limit

L= Upper Control Limit

> Relative Percent Dif

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE ALITY CONTROL SUMMARY

Page 2 of 4 260A 2110498W.XLS

Workgroup #: WG48883

Method: 8260A Run Date: 11/4/98

LCS2 FLNM: NA

LCS DF:

Matrix:

Water

Instrument ID: HPMS_2 BLK FLNM: 28K27367

SMPL FLNM: 28F27372

SMPL DF: MS DF: 10

Units:

ug/L

BLK2 FLNM: NA MS FLNM: 28F27373.D

LCS FLNM: 2QC27368.D

MSD FLNM: 28F27374.D

SMPL Num: 10-433-16

MSD DF: 10

					C	ONCENTRA	TION, PPB							PERCE	ENT REC	OVERY			PERCE	NT RPD
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPO	UÇL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	21.0	NA	20.0	ND	22.7	20.9	20.0	105.1	NA	85.0	118.0	113.6	104.4	60.0	140.0	8.4	20.0
1,1,1-trichloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20,4	20.0	20.0	104.5	NA	74.0	125.0	102.0	100.0	52.0	162.0	2.0	20.0
1,1-dichloropropene	5.0	ND	ND	23.0	NA	20.0	ND	22.3	22.1	20.0	114.9	NA	85.0	126.0	111.4	110.6	60.0	140.0	0.7	20.0
Carbon tetrachloride	5.0	ND	NO	20.9	NA	20.0	ND	21.6	19.9	20.0	104.5	NA .	73.0	129.0	108.2	99.3	70.0	140.0	8.6	20.0
1,2-dichloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20.8	21.0	20.0	104.4	NA	76.0	123.0	104.2	104.9	49.0	155.0	0.7	20.0
benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.7	20.5	20.0	104.8	NA	86.0	119.0	103.5	102.3	37.0	151.0	1.2	20.0
trichloroethene	5.0	ND	ND	21.0	NA	20.0	ND	21.9	20.1	20.0	105.1	NA	82.0	120.0	109.7	100.3	71.0	157.0	9.0	20.0
1,2-dichloropropana	5.0	שא	ND .	21.5	NA	20.0	שא	20.2	21.4	20.0	107.4	NA	74.0	126.0	100.9	107.2	ಂ	210.0	6.1	20.0
bromodichloromethane	5.0	ND	ND	20.8	NA	20.0	ND	22.7	20.3	20.0	104.0	NA	74.0	126.0	113.3	101.6	35.0	155.0	10.8	20.0
dibromomethane	5.0	ND	NO	21.5	NA	20.0	ND	22.3	21.1	20.0	107.5	NA	78.0	125.0	111.7	105.5	60.0	140.0	5.8	20.0
2-chioroethylvinyl-ether	10.0	ND	ND	20.5	NA	20.0	ND	23.1	20.8	20.0	102.5	NA	68.0	144.0	115.3	104.0	70.0	130.0	10.3	20.0
4-methyl-2-репtалоле	10.0	ND	ND:	20.0	NA:	20.0	16.3	39.2	36.2	20.0	99.9	NA :	70.0	127.0	114.6	99.6	70.0	130.0	8.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.1	NA	20.0	ND	23.9	21.2	20.0	105.3	NA	77.0	123.0	119.3	105.8	D	227.0	12.0	20.0
toluene	5.0	ND	ND	21.0	ΝA	20.0	28.7	48.6	49.2	20.0	105.2	NA .	83.0	119.0	99.7	102.7	47.0	150.0	1.2	20.0
trans-1,3-dichloropropene	5.0	ИD	ND	21.4	NA	20.0	ND	20.6	20.9	20.0	107.2	NA	74.0	124.0	103.2	104.4	17.0	183.0	1.2	20.0
1,1,2-trightoroethane	5.0	ND	NO	20.7	NA	20,0	ND	20.8	20.7	20.0	103.4	NA	72.0	119.0	104.7	103.7	52.0	150.0	1.0	20.0
2-hexanone	10.0	ND	ND	19.9	NA	20.0	ND	21.2	22.3	20.0	99.5	NA	55.0	114.0	105.9	111.3	70.0	130.0	5.0	20.0
1,3-dichloropropane	5.0	ND	ND	21.0	NA	20.0	ND	21.4	21.2	20.0	104.8	NA	73.0	122.0	107.0	105.8	60.0	140.0	1.2	20.0
tetrachioroethene	5.0	ND	ND	21.5	NA	20.0	ND	20.0	20.2	20.0	107.6	000000000000000000000000000000000000000	82.0	120.0	100.2	101.2	64.0	148.0	0.9	20.0
(524)560.00000000000000000000000000000000000	309000000000000000000	386388538638	3930343765658	KI S NOSCOS	\$00000000000000000000000000000000000000	88889888888888	50056565999059999	888898888888478	000000000000000000000000000000000000000	5000000004000410004	2000000000000000	NA	9009499999999	900000000000000000000000000000000000000	80/80008898	9082 95 J. SOM SSC	8888998884	989999999	900000000000000000000000000000000000000	satisficación escént
dibromochloromethane	5.0	ND	ND	20.5	NA	20.0	ND	20.3	20.0	20.0	102.4	NA	72.0	121.0	101.6	99.8	53.0	149.0	1.8	20.0

lotes and Definitions:

DL = Reporting Detection Limit

ND = Not Detected

LK = Method Blank

NA = Not Applicable

LK2 = Second Method Blank

CS = Laboratory Control Sample

CS2 = Second Laboratory Control Sample

MPL = Sample Results

4S/MSD = Matrix Spike / Matrix Spike Duplicate

CL = Lower Control Limit

ICL = Upper Control Limit

PD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48883

Run Date: 11/4/98

LCS2 FLNM:

LCS DF:

Method: 8260A

Instrument ID: HPMS 2

SMPL Num: 10-433-16

SMPL DF:

Matrix: Water **BLK FLNM: 2BK27367**

SMPL FLNM: 2BF27372

10 MS DF: 10

Units: ug/L BLK2 FLNM:

MS FLNM: 2BF27373.D

MSD DF: 10

NΑ

LCS FLNM: 2QC27368.D MSD FLNM: 28F27374.D

						ONCENTRA	TION, PPB	ļ			1			PERCE	NT REC	OVERY			PERCEN	IT RPD
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethans	5.0	ND	ND	20.8	NA	20.0	ND	21.3	20.5	20.0	104.2	NA	75.0	121.0	106.7	102.5	60.0	140.0	4.0	20.0
chlorobenzene	5.0	ND	ND	20.9	NA	20.0	ND	20.5	20.8	20,0	104.4	NA	83.0	120.0	102.4	103.1	37.0	160.0	0.7	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.8	NA	20.0	ND	20.2	20.3	20.0	103.8	NA	79.0	118.0	101.1	101.4	60.0	140.0	0.3	20.0
ethylbenzene	6.0	ND	ND	21.1	NA	20.0	NO	20.8	21.1	20.0	105.5	NA	82.0	119.0	104.0	105.4	37.0	162.0	1.3	20.0
m+p-xylene	5.0	ND	ND	41.3	NA	40.0	ND	41.0	41.3	40.0	103.4	NA	81.0	121.0	102.6	103.2	60.0	140.0	0.6	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ND	20.6	20.7	20.0	102.0	NA	81.0	199.0	102.8	103,5	60.0	140.0	0.7	20.0
styrene	5.0	ND	ND	20.6	NA	20.0	ND	20.9	21.0	20.0	102.9	NA	81.0	118.0	104.5	105.0	60.0	140.0	0.5	20.0
bromoform	5.0	ND	ND	19.6	NA.	20.0	ND	19.5	19.3	20.0	98.1	NA:	68.0	129.0	97.5	96.4	45.0	169.0	1,1	20,0
isopropylbenzene	5.0	ND	ND	20.7	NA	20.0	ND	22.1	22.2	20.0	103.7	NA	81.0	121.0	110.3	111.2	60.0	140.0	0.8	20.0
,1,2,2-tetrachioroethane	5.0	ND	ND	20.5	NA	20.0	ND	21.3	21.2	20.0	102.7	NA	61.0	137.0	106.7	105.9	46.0	157.0	0.7	20.0
1,2,3-trichloropropane	5.0	ND	ND	20.8	NA	20.0	ND	21.0	21.0	20.0	104.2	NA	72.0	130.0	105.0	105.2	60.0	140.0	0.2	20.0
ans-1,4-dichloro-2-butena	NTC	NO	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA.	NA	NA	NA	NA	NA	NA	NA	20.0
propyl-benzene	5.0	ND	ND	21.2	NA	20.0	ND	20.2	20.7	20.0	105.8	NA	69.0	135.0	100.9	103.3	60.0	140.0	2.3	20.0
bromobenzane	5.0	ND	ND	21.4	NA	20.0	ND.	20.6	20.9	20.0	107.1	NA	86.0	118.0	102.9	104.6	60.0	140.0	1.7	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.0	NA	20.0	ND	20.3	20.8	20.0	105.2	NA	83.0	121.0	101.5	104.0	60.0	140.0	2.4	20.0
2-chlorotoluene	5.0	ND	ND	21.2	NA	20.0	ND	20,4	20.6	20.0	106.2	NA	80,0	126.0	101.8	103.2	60.0	140.0	1.3	20.0
4-chlorotoluene	5.0	ND	ND	19.9	NA	20.0	ND	21.0	21.7	20.0	99.4	NA	80.0	125.0	104.8	108.3	60.0	140.0	3.3	20.0
tert-butyl-benzene	5.0	ND	ND	21.8	NA	20.0	ND	20.2	20.7	20.0	109.2	NA	79.0	114.0	101.1	103.6	60.0	140.0	2.5	20.0
1,2,4-trimethylbenzene	5.0	ND	МD	21.3	NA	20.0	ND	21,0	21.3	20.0	106.6	NA	84.0	121.0	105.0	106.6	60.0	140.0	1.5	20.0
sec-butyl-benzene	5.0	ND	ND	22.5	NA	20.0	ND	20.3	20.9	20.0	112.3	NA	81.0	122.0	101.4	104.4	60.0	140.0	3.0	20.0

tes and Definitions:

IL = Reporting Detection Limit

ND = Not Detected

K = Method Blank

NA - Not Applicable

K2 = Second Method Blank

S = Laboratory Control Sample

:S2 = Second Laboratory Control Sample

APL = Sample Results

S/MSD = Matrix Spike / Matrix Spike Duplicate

:L= Lower Control Limit

CL = Upper Control Limit

Workgroup #: WG48883

Run Date: 11/4/98

LCS2 FLNM: NA

LCS DF:

Method: 8260A

Instrument ID: HPMS_2

SMPL Num: 10-433-16

SMPL DF: 10

Matrix: W

Water BLK FLNM: 2BK27367

SMPL FLNM: 2BF27372

MS DF: 10

10

Units: ug/L

BLK2 FLNM:

MS FLNM: 28F27373.D

MSD DF:

LCS FLNM: 2QC27368.D

NA

MSD FLNM: 2BF27374.D

	1					CONCENTRA	TION, PPB	1						PERCE	NT REC	OVERY			PERCE	NT RPD
	ļ					LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	<u>LC</u> S	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LÇL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	21.6	NA	20.0	ND	19.8	20.1	20.0	108.2	NA	80.0	119.0	99.0	100.5	60.0	140.0	1.6	20.0
1,3-dichlorobenzene	5.0	NO	ND	21.7	NA	20.0	ND	20.0	20.6	20.0	108.6	NA	85.0	119.0	100.1	103,2	60.0	140.0	3.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	20.5	21.0	20.0	105.7	NA	82.0	122.0	102.5	105.1	18.0	190.0	2.5	20.0
n-butyl-benzene	5.0	ND	ND	22.7	NA	20.0		20.2	20.9	20.0	113.3	NA	80.0	125.0	101.2	104.7	80.0	140.0	3.4	20,0
1,2-dichlorobenzene	5.0	ND	ND	21.7	NA	20.0	ND	20.5	21.3	20.0	108.5	NA	86.0	119.0	102.4	106.3	19.0	190.0	3.7	20.0
,2-dibromo-3-chloropropane	5.0	ND	ND	22.5	NA	20.0	ND	20.5	20.4	20.0	112.7	NA	66.0	134.0	102.5	101.9	60.0	140.0	0.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	21.9	NA ·	20.0	ND	19.9	20.1	20.0	109.6	NA	78.0	122.0	99.5	100.4	60.0	140.0	0.9	20.0
hexachlorobutadiene	5.0	ND	ND	19.5	NA	20.0	ND	16.8	17.4	20.0	97.6	NA	73.0	125.0	84.1	87.2	60.0	140.0	3.8	20.0
napthalene	10.0	ND	ND	21.3	NA	20.0	ND	21.0	20.7	20.0	106.3	NA	74.0	148.0	105.2	103.3	60.0	140.0	1.8	20.0
1,2,3-trichlorobenzene	5.0	NO	ND	21.5	NA	20.0	ND	19.8	20,1	20.0	107.5	NA	74.0	124.0	99.2	100.7	60.0	140.0	1.6	20.0

LK2 = Second Method Blank

CS = Laboratory Control Sample

CS2 = Second Laboratory Control Sample

MPL = Sample Results

IS/MSD = Matrix Spike / Matrix Spike Duplicate

CL = Lower Control Limit

CL = Upper Control Limit

PD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48919

Method: 8260A

Matrix: Water Units: ug/L

Run Date: 11/4/98

Instrument ID: HPMS_9 BLK FLNM: 9BK00095 SMPL Num: 10-552-07

LCS2 FLNM:

LCS DF:

SMPL FLNM: 9BR00099

SMPL DF: 10 MS DF: 10

BLK2 FLNM: NA

MS FLNM: 9BR00100

MSD DF: 10

LCS FLNM: 9QC00096

MSD FLNM: 98R00101

İ					C	ONCENTRA	TION, PPB				<u> </u>			PERCE	NT REC	OVERY			PERCEN	IT RPD
	Ì					LCS Spike	,			MS Spike			LÇŞ	LCS	•		MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	L.CS_	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%		%	%	%	%	%	%
ichlorodifluoromethane	10.0	NO	ND	11.2	NA	20.0	ND	8.9	11.0	20,0	€6.2	NA	38.0	148.0	44.6	54,8	60.0	140.0	20.6	20.0
chloromethane	10.0	ND	ND	15.9	NA	20.0	ND	14.5	16.8	20.0	79.4	NA	56.0	132.0	72.7	84.2	D	273.0	14,7	20.0
vinyl chloride	10.0	ND	ND	19.2	NA	20.0	ND	16.7	19,3	20.0	96,0	NA.	68.0	125.0	83,4	96.3	D	251.0	14.4	20.0
bromomethane	10.0	ND	ND	18.2	NA	20.0	ND	16.6	18.9	20.0	90.8	NA	55.0	138.0	83.1	94.4	D	242.0	12.7	20.0
chloroathane	10.0	NO	ND	17.5	NA	20.0	NO	15.8	17.4	20.0	87.7	NA	70.0	128.0	79.0	87.2	14,0	230.0	9.8	20.0
richlorofluoromethane	10.0	ND	ND	17.9	NA	20.0	ND	14.5	16.3	20.0	89.4	NA	70.0	127.0	72.4	81.3	17.0	181.0	11.5	20.0
frean 113	NTC	ND	ND	NA.	NA	20.0	ND	NA	NA .	20.0	NA	NA.	NA	NA :	NA	NA.	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	16.9	NA	20.0	ND	17.7	17.8	20.0	84.7	NA	44.0	114.0	88.7	89.1	70.0	130.0	0.5	20.0
1,1-dichioraethene	5.0	NO	ND	19.0	NA	20.0	ND	15.8	17.9	20.0	95.0	NA	69.0	144.0	79.0	89.5	Ð	234.0	12.5	20.0
iodomethane	NTC	ND	ND	14.5	NA	20.0	ND	12.9	15.2	20.0	72.7	NA	NA	NA	64.5	75.9	70.0	130.0	16.2	20.0
methylene chloride	5.0	ND	ND	20.3	NA	20.0	ND	19.8	20.8	20.0	101.6	NA	71.0	128.0	99.1	103.8	D	227.0	4.6	20.0
carbon disulfide	5.0	ND	ND	19.0	NA	20.0	ND	16.6	17.8	20.0	95.2	NA	67.0	136.0	83.1	89.0	70.0	130.0	6.9	20.0
acrylonitrile	NTC	ND	ND	NA.	NA	20.0	ND	NA	NA	20.0	NA	NA.	NA	NA.	NA	NA	70.0	130.0	NA	20.0
ans-1,2-dichloroethene	5.0	ND	ND	20.8	NA	20.0	ND	18.5	20.3	20.0	103.9	NA	85.0	133.0	92.4	101.3	54.0	156,0	9.2	20.0
vinyl acetate	10.0	NO	ND	9.7	NA	20.0	ND	16.7	17.1	20.0	48.6	NA	9.0	236.0	83.4	85.5	9.0	236.0	2.4	20.0
1,1-dichloroethane	5.0	ND	ND	19.9	NA	20.0	ND	18.3	20.1	20.0	99.4	NA	82.0	124.0	91.7	100.4	59.0	155.0	9.1	20.0
2-butanone	100,0	ND	ND	18,3	NA	20.0	ND	16.0	16.3	20.0	91.5	NA	43.0	140.0	B0.0	81.6	70.0	130.0	2.0	20.0
2,2-dichloropropane	5.0	ND	ND	17.0	NA	20.0	ND	13.3	15.1	20.0	85.0	NA	77.0	126.0	66.7	75.5	60.0	140.0	12.5	20.0
sis-1;2-dichloraethene	5.0	NO	dи	19.2	NA	20.0	ND	18.0	19.1	20.0	96.1	NA	69.0	130,0	89.8	95.5	60.0	140,0	6.1	20.0
chloroform	5.0	ND	ND	20.1	NA	20.0	ND	18.8	20.4	20.0	100.5	NA	83.0	121.0	94.0	102.1	51.0	138.0	8.2	20.0

es and Definitions:

.= Reporting Detection Limit

:2 = Second Method Blank

ND = Not Detected , NA = Not Applicable

:= Method Blank

i = Laboratory Control Sample

32 = Second Laboratory Control Sample

PL = Sample Results

/MSD = Matrix Spike / Matrix Spike Duplicate

.= Lower Control Limit

L = Upper Control Limit

) = Relative Percent Diff

Workgroup #: WG48919

Method: 8260A

Run Date: 11/4/98 Instrument ID: HPMS 9 LCS2 FLNM: NA SMPL Num: 10-552-07 LCS DF:

Matrix: Water BLK FLNM: 98K00095

SMPL FLNM: 9BR00099

SMPL DF: 10 MS DF: 10

Units:

ug/L

BLK2 FLNM: NA MS FLNM: 98R00100

MSD DF: 10

LCS FLNM: 9QC00096

MSD FLNM: 98R00101

				,	C	ONCENTRA	TION, PPB				Τ			PERC	ENT REC	OVERY			PERCE	NT RPD
					•	LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDŁ	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.5	NA	20.0	ND	20.6	20.8	20.0	102.3	NA	85.0	118.0	103.0	104.0	60.0	140.0	1.0	20.0
1,1,1-trichloroethane	5.0	DM	ND	19.1	NA	20.0	ND	16.8	18.5	20.0	95.5	NA	74.0	125.0	83.0	92.5	52.0	162.0	10.B	20.0
1,1-dichloropropene	5.0	ND	ND	20.6	NA	20.0	ND	17.6	19.7	20.0	103.1	NA	85.0	126.0	88.1	98.6	60.0	140.0	11.3	20.0
carbon tetrachioride	5.0	ND	ND	20.0	NA	20.0	ФИ	16.5	18.6	20.0	100.1	NA	73.0	129.0	82.4	93.1	70.0	140.0	12.1	20.0
1,2-dichloroethane	5.0	ND	ND	20.5	NA	20.0	ND	19.7	20.1	20.0	102.7	NA	76.0	123.0	98.5	100.5	49.0	155.0	2.0	20.0
benzens	5.0	ND	ND	19.4	NA	20.0	ØИ	17.7	19.3	20.0	97.1	NA	86.0	119.0	88.6	96.3	37.0	151.0	8.3	20.0
trichloroethene	5.0	ND	ND	21.2	NA	20.0	ND	16.9	19.1	20.0	106.0	NA	82.0	120.0	84.6	95.4	71.0	157.0	11.9	20.0
1,2-dichloropropane	5.0	ND	ND	18.9	NA	20.0	ND	19.0	20.2	20.0	99.5	NA:	74.0	128.0	95.2	100.8	D.	210.0	5.7	20.0
bromodichloromethane	5.0	МD	ND	21.0	NA	20.0	ND	20.0	21,2	20.0	105.2	NA	74.0	126.0	99.9	106.2	35.0	155.0	6.2	20.0
dibromomethane	5.0	ND	ND	20.7	NA	20.0	ND	19.9	20.1	20.0	103.5	NA .	78.0	125.0	99.6	100.7	60.0	140.0	1.1	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	18.6	NA	20.0	ND	15.5	15.3	20.0	93.2	NA	68.0	144.0	77.3	76.7	70.0	130.0	0.8	20.0
4-methyl-2-pentanone	10,0	ODM	ND	18.3	NA:	20.0	ND	20.1	19.9	20.0	91.3	NA	70.0	127.0	100.4	99.7	70.0	130.0	0.7	20.0
cis-1,3-dichloropropene	5.0	ND	ND	20.2	NA	20.0	ND	19.2	20.1	20.0	101.1	NA	77.0	123.0	96.1	100.5	D	227.0	4.5	20.0
toluene	5.0	ND	ND	19.3	NA	20.0	NĎ	17.8	19.0	20.0	96.6	NA	83.0	119.0	87.8	95.0	47.0	150.0	7.9	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.2	NA	20.0	ND	18.2	18.7	20.0	95.9	NA	74.0	124.0	90.9	93.7	17.0	183.0	3.1	20.0
1,1,2-trichloroethans	5.0	ND	ND	19,6	NA	20.0	ND	18.3	18.7	20.0	98.1	NA	72.0	119.0	91.4	93.5	52.0	150.0	2.3	20.0
2-hexanone	10.0	ND	ND	17.3	NA	20.0	ND	23.5	23.0	20.Ò	86.6	NA	55.0	114.0	117.3	114.8	70.0	130.0	2.2	20.0
1,3-dichtoropropans	5.0	ND.	ND :	19.4	NA	20.0	ND	18.4	18.6	20.0	98.8	NA	73.0	122.0	92.1	93.1	60.0	140.0	1.1	20.0
tetrachloroethene	5.0	ND	ND	18.6	NA	20.0	ND	15.8	17.9	20.0	93.2	NA	82.0	120.0	79.0	89.4	64.0	148.0	12.4	20.0
dibromochloromethane	5.0	ND	ND	19.8	NA:	20.0	ND	18.8	19.9	20.0	99.2	NA:	72.0	121.0	94.2	99.6	53.0	149.0	5.5	20.0

Votes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

3LK = Method Blank

NA = Not Applicable

3LK2 - Second Method Blank

.CS = Laboratory Control Sample

.CS2 = Second Laboratory Control Sample

3MPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

.CL = Lower Control Limit

JCL = Upper Control Limit

IPD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG48919

Matrix:

Run Date: 11/4/98

LCS2 FLNM: NA LCS DF:

Method: 8260A

Water

Instrument ID: HPMS_9 BLK FLNM: 9BK00095 SMPL Num: 10-552-07

SMPL DF: 10

Units: ug/L **BLK2 FLNM:** NA SMPL FLNM: 98R00099 MS FLNM: 9BR00100

MS DF: 10 MSD DF:

10

LCS FLNM: 9QC00096

MSD FLNM: 9BR00101

						ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCEN	NT RPD
					-	LCS Spike)	·		MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL_	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND)	19.7	NA	20.0	ND	18.7	19.0	20.0	98.5	NA	75.0	121.0	93.5	95.1	60.0	140.0	1.6	20.0
chlorobenzene	5.0	ND.	NC	19,9	NA	20.0	ND	18,4	19.8	20.0	99.6	NA	83.0	120.0	92.1	98.9	37.0	160.0	7.1	20.0
1,1,2-tetrachloroethane	5.0	ND	ND	19.7	NA	20.0	ND	19.0	20.1	20.0	98.6	NA	79.0	118.0	95.1	100.5	60.0	140.0	5.6	20.0
ethylbanzena	5.0	ND	ND	19.1	NA	20.0	DN	17.6	19.0	20.0	95.5	NA	82.0	119.0	87.8	94.8	37.0	162.0	7.6	20.0
m + p-xylene	5.0	ND	ND	38.0	NA	40.0	ND	34.6	37.8	40.0	95.0	NA	81.0	121.0	86.5	93.9	60.0	140.0	8.2	20.0
o-xylene	5.0	ND	ND	19.5	NA	20.0	ND	18,0	19.5	20.0	97.7	NA	81.0	199.0	89.9	97.6	60.0	140.0	8.2	20.0
styrene	5.0	ND	ND	20.0	NA	20.0	ND	18.6	20.1	20.0	100.0	NA	81.0	118.0	93.2	100.4	60.0	140.0	7.5	20.0
bromoform	5.0	ND	ND	15.3	NA	20.0	ND	14.4	14.4	20.0	78.3	NA	68.0	129.0	72.1	71.8	45.0	169.0	0.5	20.0
isopropylbenzene	5.0	ND	ND	19.1	NA	20.0	ND	16.6	18.5	20.0	95.6	NA	81.0	121.0	83.1	92.3	60.0	140.0	10.5	20.0
1,2,2-tetrachioroethane	5.0	ND	ND	17.4	NA	20.0	NO	18.9	18,4	20.0	86.9	NA	61.0	137.0	94.4	92.1	46.0	157.0	2.5	20.0
1,2,3-trichloropropane	5.0	ND	ND	19.3	NA	20.0	ND	18.9	18.4	20.0	96.3	NA	72.0	130.0	94.5	92.0	60.0	140.0	2.7	20.0
ns-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA .	20.0	NA	NA	NA-	NA.	NA	NA	NA	NA	NA	20,0
propyl-benzene	5.0	ND	ND	18.6	NA	20.0	ND	16.5	18.4	20.0	92.8	NA	69.0	135.0	82.5	91.9	60.0	140.0	10.8	20.0
bromobenzene	5.0	ND	ND	19.4	NA	20.0	ND	18.8	19.7	20.0	96.8	NA	86.0	118.0	93.9	98.3	60.0	140.0	4.6	20.0
,3,5-trimethylbenzene	5.0	ND	ND	18.8	NA	20.0	ND	17.2	18.9	20.0	93.9	NA	83.0	121.0	86.1	94.4	60.0	140.0	9.2	20.0
2-chlorotoluene	5.0	NO.	ND	17.7	NA	20.0	ND	17.6	21.2	20.0	88.3	NA	80.0	128.0	88.1	106.0	60.0	140.0	18.5	20.0
4-chlorotoluene	5.0	ND	ND	20.0	NA	20.0	ND	17.9	17.4	20.0	99.8	NA	80.0	125.0	89.7	87.1	60.0	140.0	2.9	20.0
tert-butyl-benzene	5.0	ND	ND	19.0	NA	20.0	ND	17.1	18.8	20.0	94.8	NA	79.0	114.0	85.4	94.0	60.0	140.0	9.5	20.0
,2,4-trimethylbenzene	5.0	ND	ND	18.9	NA	20.0	ND	17.8	19.4	20.0	94.3	NA	84.0	121.0	88.8	97.2	60.0	140.0	9.1	20.0
sec-butyl-benzene	5.0	ND	ND	18.0	NA	20.0	ND	15.8	17.7	20.0	89.9	NA.	81.0	122.0	78.9	88.4	60.0	140.0	11.4	20,0

tes and Definitions:

L = Reporting Detection Limit

ND = Not Detected

(= Method Blank

NA = Not Applicable

(2= Second Method Blank

3 = Laboratory Control Sample

32 = Second Laboratory Control Sample

IPL = Sample Results

i/MSD = Matrix Spike / Matrix Spike Duplicate

L = Lower Control Limit

L= Upper Control Limit

D = Relative Percent D

8260







Workgroup #: WG48919

Run Date: 11/4/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Matrix:

Instrument ID: HPMS_9

BLK2 FLNM:

SMPL Num: 10-552-07

SMPL DF: 10

Water

BLK FLNM: 9BK00095

SMPL FLNM: 9BR00099

MS DF: 10

10

Units: ug/L

NA

MS FLNM: 9BR00100

MSD DF:

LCS FLNM: 9QC00096 MSD FLNM: 9BR00101

			CONCENTRATION, PPB									PERCENT RECOVERY				PERCENT RPD				
,						LCS Spike			•	MS Spike	_		LCS	LCS			MS	MS	мѕ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L .	ug/L	_%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	17.9	NA	20.0	ND	16.0	17.6	20.0	89.5	NA	80.0	119.0	79.8	88.2	60.0	140.0	10.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.2	NA	20.0	ND	18.4	19.8	20.0	96.1	NA:	85.0	119.0	92.0	99.1	60.0	140.0	7.4	20.0
1,4-dichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	18.3	19.4	20.0	94.3	NA	82.0	122.0	91.5	97.1	18.0	190.0	5.9	20.0
n-butyl-benzene	5.0	ND	DM	18.4	NA	20.0	ND	15.9	18.0	20.0	92.1	NA	80.0	125.0	79.3	89.9	60.0	140.0	12.5	20.0
1,2-dichlorobenzene	5.0	ND	ND	19.7	NA	20.0	ND	19.1	19.7	20.0	98.3	NA	86.0	119.0	95.7	98.7	19.0	190.0	3.1	20.0
1,2-dibrome-3-chloropropane	5.0	ND	ND	15.8	NA	20.0	ND	15.0	15.0	20.0	79.1	NA	66,0	134.0	74.9	74.8	60.0	140.0	0.2	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	19.0	NA	20.0	ND	18.3	19.1	20.0	95.1	NA	78.0	122.0	91.4	95.4	60.0	140.0	4.3	20.0
hexachlorobutadiene	5.0	ND	ND	17.7	NA	20.0	ND	15.0	17.0	20.0	88.7	NA	73.0	125.0	75.1	85.0	60.0	140.0	12.4	20.0
napthalene	10.0	ND	ND	19.1	NA	20.0	ND	18.1	18.9	20.0	95.3	NA	74.0	148.0	90.3	94.6	60.0	140.0	4.7	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	18.2	18,8	20.0	94.5	NA	74.0	124.0	90.8	94.1	60.0	140.0	3.6	20.0

BLK2 = Second Method Blank

_CS = Laboratory Control Sample

_CS2 = Second Laboratory Control.Sample

3MPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

_CL = Lower Control Limit

JCL = Upper Control Limit

RPD = Relative Percent Difference

ND - Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 8061 WATERS , REAR

INSTRUMENT: HP9

ANALYST : ECL

BLK FLNM: 1249

SAMPLE ID: NA

EXT'N DATE: 11/3/98 EXT'N BENCH SHT: V104P41

RUN DATE: 11/5/98

LCS FLNM: 1250

SMPL FLNM: NA MS FLNM : NA

EXT'N WORK GRP: WG48766 ANAL WORK GRP: WG48855

MSD FLNM: NA

	CONCENTRATION ,		NTRAT	ION, U	o/L			* 1	RECO	/ERY			PERCENT						
COMPOUND	FIDI.	Blank	LCS	.Samp	le MS	MSD	Blank	LCS		LCS UCL	Sample	MS	MSD	MS LCL		MS/MSD RPD	RPD Advisory Limists	Blank LCS	Sample MS
	A CHARACTER																Zholomen er in dan		0.2
ALPHA-BHC	0.05	ND .	0.357	IND	NA	NA	NA.	71.4	37	134	NA	*****	* ******	51	145	NA.	0-43	: Harmitiae	
GAMMABHC	0.05	ND.	, , , , ,	ì∵ND.	∴ ŅĄ	∴ Na	::NA	81.8	32	127	· NA	becen	b destad	51	134	NA :	0.18		
BETA-BHC HEPTACHLOR	0.05	NO		I ND	NA.	NA	, NA	93.4	17	147	NA	*****		51	129	NA	0-28		# 4
DELTA-BHC	0.05 0.05	.ND∷	0.334		· NA	, NA	NA :	66.8∶	34:	311	NA.	anpequ		40	. (29	NA .	0:37		
ALDRIN	0.05	ND NO	0.565		NA	NA	NA 	113.0	19	140	NA .	*****	*******	56	138	NA	0-78	ľ	# 4
HEPTACHLOR EPOXIDE	0.05	ND:	(0.330) 0.453		() NA	NA.	DOMAN,	66,0	12	· · - 8	ŅA,	i in a pind	e in a diamen	26	. 143	NA .	0-38		
BAMMA-CHLORDANE	0.05	ND.		I ND	NA NA	NA NA	. NA	90.6	37	142	NA	*****		51	135	NA.	0-40		
ALPHA-CHLORDANE	0.05	ND.		I ND	NA.	NA.	:::NA ;:; NA	(CARDE): NA	54	119	NA :	··· (NAI)	DOD NAS	:45-:	115	· NA · · · ·	0-40		
ENDOSULFAN I	D.05	NO :	0.382		∵NA	∷ NA	NA:	78.4	15		NA NA	NA	NA Primiliani	45	115	NA	0-17	1,1,1,1,1,	
4,4-DOE	0.10	ND	0.536	• • • • •	NA	NA	NA.	107.2	30	145	NA.	********		:37: 64	123 152	ji;najijii Na	0.22		
DIECORIN	0.10	NÓ	0.531	CND:	NA	NA	NA .	105.2	36		NA :	*******			171	NA	0-23	>:::::	# # 202000
ENDRIN	0.10	ND	0.483	I ND	NA	NA	NA.	96,6	30	147	NA.	********		56	154	NA NA	0:20 · · · 0-28	*****	
4.4000	0.10	NO	0.539	ND.	NA.	NA	NA :	107.8	[ai∷	· (f	NA.		. No danak		179	NA	0-30		
ENDOSULFAN B	0.10	ND	0.485	i ND	NA	NA	NA.	97.0	Б	202	NA.		****		117	NA	· · · · የማም · · · · 0-18		
CALL CONTROL OF THE CALL OF TH	0.10	ND.	0.680) ND	NÁ.	·w	NA:	116.0	25	150	NA :	******	******	42	~~	NA :::	0-22		
ENDRIN ALDEHYOE	0.10	ND .	0.381	I ND	NA	NA	NA.	76.2	NA	NA	NA	******	******		115	NA.	0-40	14444	e de la composición de la composición de la composición de la composición de la composición de la composición d La composición de la
ENDOSULFAN SULFATE	P, ID;	NO.	0.468	l Nb:	· NA	∵NA	NA:	93.6	26	144	NA :		. den bedu		117	NA :	0-30	4.44	
METHOXYCHLOR	0.10	ND	0.567	ND.	NA	NA	NA.	113	NA	NA	NA	******	******		196	NA	0-19		
ENDRIN KETONE	0.50	ΝĎ	0.558	ND:	NA.	NA	NA .	312	ŇÀ.	NA.	. NA	******		·NA		NA			
Tech-CHLORDANE	1.0	ND .	NA	I ND	NA	NA	NA.	NA .	45	119	NA	NA	NA.		115	NA.	0-40		order.
TOXAPHENE	.). D.	NO:	NA :	l∵ND.	NA:	∴na.	··· NA	:::NA:::	310	126	NA :	NA:	::NA	40		NA:	0.40		
SURROGATES										-}					\dashv				
										巾					-1				
A.S. S. TEYRACHLORO M.XYLENE		11.5	9.98	0.00	0.00	0.00	57.3	49.9	13	išą į	0.0	0.0	0.0	13	154				i.c
DECACHLOROBIPHENYL	,	17,7	18.8	0.0	0.0	0.0	88.4	94.2	25	140	0.0	0.0	0.0		140				

NOTES & DEFINITIONS:

LCS, MS & MSD apiked at 2.5 ug/kg | LCS=LABORATORY CONTROL SAMPLE

SURROGATES epiked at 20 utylog

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL - DILUTED OUT

NO . NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / PCB WATERS , REAR

INSTRUMENT : HP4

SMPL ID: 11-011-14

EXT'N DATE: 11/03/98

ANALYST: ECL

SMPL FLNM: 031R0101

EXT'N BENCH SHT: V104P42

FUN DATE: 11/05/98

LCS FLNM: 030R0101 MS FLNM: 032R0101

EXT'N WORK GRP: WG48767

ANAL WORK GRP: WG48852

MSD FLNM: 033R0101

CONCENTRATION, ug/L % RECOVERY PERCENT LCS LCS RPD Advisory MS MS COMPOUND RDL Blank LCS Sample MS MSD Blank LCS LCL UCL Sample MS MSO LCL UCL RPD Limits THE PERSON NAMED OF THE PE ger its and AROCLOR 1016 0.5 ND 1.62 ND 4.37 4.19 NA 72.9 48 125 83.8 48 125 0-40 AROCLOR 1221 0.5 ND NA ND NA NA: NA 🔆 NA NA NA . NA NA NA . NA. NA: 0-40 AROCLOR 1232 0.5 ND NA ND NA NA NA NA NA NA NA NA NA 0-40 AROCLOR 1242 0.5 ND NA ND NA NA NA: NA. NA. NA NA NA NA NA NA NA 0-40 AROCLOR 1248 0.5 ND ND NA NA NΑ NA NA 0-40 AROCLOR 1254 1.0 NQ. NA. ND NA. NA: NA: NA NΑ NA NA ΝĄ NA NA 🖒 NA NA. 0-40 AROCLOR 1260 1.0 ND 2.20 ND 4.66 4.81 59 122 NA 93.1 96.2 59 122 3.2 0-40 græne

55.0

79.0

13 154

25 140

63.5

B1.0

85.5 67.0

98.8

97.5

13 154

25 140

BLK FLNM: 029R0101

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 2.5 ug/L SURROGATES spiked at .200 ug/L

NA = NOT APPLICABLE

DL = DILUTED OUT

NO . NOT DETECTED

SURROGATES

245.6 TETRACHLORO-M-XYLENE

DECACHLOROBIPHENYL

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

0.127

0.182

0,342

0.390

0.268

0.395

75.0

115.0

MS=MATRIX SPIKE

0.150

0.230

MSC≔MATRIX SPIKE DUPLICATE

0.110

0.158

ATPRT

;HAIN-OF-CUSTODY RECORD Project Contact: 91ab Jully Bucton Furn Around Requirements: Project No.: Project Name:

1119-007 PACOE Podricktown

Sampler (print): Signature:

EKlinaubiel ErwKlingbul Project No.: Project Name: **ADDITIONAL** REQUIREMENTS Grab Sample I.D. No. CWA SW846 Date Time 10/24/98 R102798 RPPSOLXIL Time Received by: Received by: Relinquished by: Date Relinquished by: Signature) Date Time (Signature) (Signature) (Signature) 1929198 1700 Date Time Remarks: Received for Laboratory by: Time Date Relinquished by: Signature) (Signature)

iomogenize all composite samples prior to analysis

White - Lab Yellow - Office Pink - Fie

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	·									
	Work Order	<u> </u>	634 Client_	Ner-m	Û #of S:	imples	Due Date_	11/13_	Page_(
Sample #	Analyses	Reason	Removed By	Removed	MovedTo	Reliq.	Ret'd by	Ret'd	Rec'd	Reason
			ADI	From		Ву	ADT	То	Ву	
1-5	755	Anal	DLP 11-02-58/0815	Walksin	wet-	Mg	DUP 14-02-91/1645	Archive	319	Archive
445	8270	SXT	plr 11-02-98@1400	WALKIN	E-LAB	Bla	SMW11/03/1880500	l .		Disposal
1,4,5	907181 KBW	EXT	NE 11-3-98@1400	WOLK-IN	EINB	SHO	amwillpylasara		PXa	Repard
1,4,5	8240	Analysis	SLT11/4/98 1410	γ ,	Voa	Big	MAS " 139 E NO	Archive	BIG	Archive
1,4,5	CN	AN	Sm/11-9-95/0300	WALKIN	Win	BIR	14-01-95/05	Archive	Big	Avohive
· · · · · · · · · · · · · · · · · · ·			,			,)		-	J	
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					-					

KEMRON Environmental Services 109 Starli Park Marietta, Oh 45750

Phone: (/4U) 3/3-4U/1

Versar, Inc.

9200 Rumsey Road

Columbia, MD 21045-1934

Login #: L9811029 Report Date: 11/18/98 Work ID: 4119-007/PEDRICKTOWN

Date Received: 11/03/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
L9811029-01 L9811029-03 L9811029-05	WEIR 1102/GRAB MIX 1102/GRAB INLET 1102/SEDIMENT/GRAB	L9811029-02 L9811029-04 L9811029-06	WEIR 1102/COMP. INLET 1102/WATER/GRAB WEIR 1101/COMP
L9811029-07	WEIR 10/31/COMP	L9811029-08	WEIR 10/30/COMP

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

RLAP ID: 10861

Dennis S. Tepe



Order #98-11-029 November 18, 1998 12:38

KEMRON ENVIRONMENTAL SERVICES REPORT NARRATIVE

SEMIVOLATILE ORGANICS - 8270:

Sample fraction 04 yielded % recoveries for two surrogates that were outside acceptable limits. There was insufficient sample remaining for re-extraction analysis.

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Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-01 Client Sample ID: WEIR 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 18:56

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: N/A

Instrument: HPMS5

Analyst: MDC Lab File ID: 8613

Method: 8270C\3510C Run ID: R56233 Batch: WG49078

CAS #	Compound	Units	Result Qualifiers	ŔĹ	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis (2-Chloroethyl) ether.	ug/L	ND	10	2	
95 - 57-8	2-Chlorophenol	ug/L	ND	10	2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene.	ug/L	ND	10	ž	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	DIS (2-Chloro) somrony Lether	ug/L	ND	10	2	
106-44-5	4-Methylphenol. N-Nitroso-di-n-propylamine.	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2 2	
67-72-1	Hexachloroethane	ug/L	ND	īŏ	2	
98-95-3	Nitrobenzene	ug/L	ND	ĩŏ	2	
78-59-1	Isophorone	ug/L	ND	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10		
105-67-9	2,4-Dimethylphenol	ug/L	ND	īŏ	2	
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L	ND	īŏ	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	ĩo	$\bar{\mathbf{z}}$	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	īŏ	ž	
91-20-3	Naphthalene	ug/L	ND	ĩŏ	$\bar{\mathbf{z}}$	
106-47-8	4-Chloroaniline	ug/L	ND	10	2	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88 -74-4	2-Nitroaniline	ug/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ND	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	, ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	, ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	ND	10	2	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2	

ogin #L9811029 ovember 18, 1998 12:38 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9811029-01 Client Sample ID: WEIR 1102/GRAB

Site/Work ID: 4119-007/PEDRICKTOWN % Solid: N/A

Date Collected: 11/02/98 Matrix: Water

Method: 8270C\3510C 'CLP Extract Date: N/A Instrument: HPMS5

Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 18:56 Analyst: MDC Lab File ID: 8613 Run ID: R56233 Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
86-73-7	Fluorene	ug/L	* *	ND	10	2	
100-01-6	4-Nitroaniline	ug/L		ND	50	2	
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2	
86-30-6	N-Nitrosodiphenviamine	ug/L		ND	10	2	
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2	
118-74-1	Hexachlorobenzene	ug/L		ND	10	2	
87-86-5	Pentachlorophenol	ug/L		ND	50	2	
85-01-8	Phenanthrene	ug/L		ND	10	2	
120-12-7	Anthracene	ug/L		ND	10	2	
86-74-8	Carbazole	ug/L	•	ND	10	2	
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2	
206-44-0	Fluoranthene	uq/L		ND	10	2	
129-00-0	Purana	ug/L		ND	10	2	
85-68-7	Butylbenzylphthalate	ug/L		ИĎ	10	2	
91-94-1	3,3 ⁷ -Dichlorobenzidine	ug/L		ND	20	2	
56-55-3	Benzo (a) anthracene	ug/L		ND	10	2	
218-01-9	Chrysene	ug/L		ND	10	2	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ИD	10	2	
117-84-0	Di-n-octvlphthalate	ug/L	,	ND	10	2	
205-99-2	Benzo (b) fluoranthene	ug/L		ND	10	2	
207-08 -9	Benzo(k) fluoranthene	ug/L		ND	10	2	
50-32-8	Benzo (a) pyrene	ug/L		ND	10	2	
193-39-5	Indeno (1, 2, 3-cd) pyrene	ug/L		ND	10	2	
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ИD	10	2 2	
191-24-2	Benzo(g,h,i) Perylene	ug/L		ND	10	4	
amp	OGATES- In Percent Recovery:						
DULK	2-Fluorophenol	45.0	(21 - 100%)			
	Phenol-d5	27.1	į	īō - 94%)			
	Nitrobenzene-d5	63.8	į	35 - 114%)			
	2-Fluorobiphenyl	69.3	Ì	43 - 116%)			
	2,4,6-Tribromophenol	88.5	Ì	10 - 123%)			
	p-Terphenyl-d14	94.4	ì	33 - 141%)			
	N. Terhiemit. Gravition		'	•			

L = Reporting Limit

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-01 Client Sample ID: WEIR 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/06/98 Time: 16:05

Dil. Type: N/A COC Info: N/A Date Collected: 11/02/98 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS9

Method: 8260B Run ID: R55825

Analyst: SLT Lab File ID: 9VR00155

Batch: WG49003

74-87-3 Chloromethane. ug/L ND 10 74-83-9 Bromomethane. ug/L ND 10 75-01-4 Vinyl chloride. ug/L ND 10 75-00-3 Chloroethane. ug/L ND 10 75-09-2 Methylene chloride. ug/L ND 5.0 67-64-1 Acetone. ug/L ND 5.0 75-15-0 Carbon disulfide. ug/L ND 5.0 75-35-4 1,1-Dichloroethene. ug/L ND 5.0 75-34-3 1,1-Dichloroethane. ug/L ND 5.0 540-59-0 1,2-Dichloroethane. ug/L ND 5.0 67-66-3 Chloroform. ug/L ND 5.0 107-06-2 1,2-Dichloroethane. ug/L ND 5.0 78-93-3 2-Butanone. ug/L ND 5.0 71-55-6 1,1,1-Trichloroethane. ug/L ND 5.0 76-23-5 Carbon tetrachloride. ug/L ND 5.0	llution
74-83-9 Bromomethane. ug/L	
75-01-4 Vinyl Chloride. ug/L	1
75-09-2 Methylene chloride	<u> </u>
ND S.0 ND ND ND ND ND ND ND N	1
67-64-1 Acetone	<u> </u>
75-15-0 Carbon disulfide ug/L	<u>1</u>
75-34-3 1,1-Dichloroethene. ug/L ND 5.0 75-34-3 1,1-Dichloroethane. ug/L ND 5.0 540-59-0 1,2-Dichloroethene (Total) ug/L ND 5.0 67-66-3 Chloroform. ug/L ND 5.0 107-06-2 1,2-Dichloroethane. ug/L ND 5.0 78-93-3 2-Butanone. ug/L ND 5.0 71-55-6 1,1,1-Trichloroethane. ug/L ND 10 56-23-5 Carbon tetrachloride. ug/L ND 5.0	<u> </u>
ND So ND So ND So So ND ND So ND So ND So ND So ND So ND So ND ND ND So ND ND ND So ND ND ND ND ND ND ND N	Ţ.
1,2-Dichloroethene (Total) ug/L ND 5.0	<u> </u>
67-66-3 Chloroform ug/L ND 5.0 107-06-2 1,2-Dichloroethane. ug/L ND 5.0 78-93-3 2-Butanone ug/L ND 10 71-55-6 1,1,1-Trichloroethane. ug/L ND 5.0 56-23-5 Carbon tetrachloride. ug/L ND 5.0	<u> </u>
107-06-2 1,2-Dichloroethane ug/L ND 5.0 78-93-3 2-Butanone ug/L ND 10 71-55-6 1,1,1-Trichloroethane ug/L ND 5.0 56-23-5 Carbon tetrachloride ug/L ND 5.0	‡
78-93-3 2-Butanone	<u>+</u>
71-55-6 1,1,1-Trichloroethane	<u> </u>
56-23-5 Carbon tetrachloride	÷
	+
75-27-4 Bromodichloromethaneug/L ND 5.0	1
78-87-5 1,2-Dichloropropane	†
	1
79-01-6 Trichloroethene.	1
124-48-1 Dibromochloromethane ug/L ND 5.0	†
79-00-5 1,1,2-Trichloroethane ug/L ND 5.0	Ť
71-43-2 Benzene vg/L ND 5.0	ī
10061-02-6 trans-1,3-Dichloropropene ug/L ND 5 n	า๊
75-25-2 Bromoformug/L ND 5.0	ĩ
108-10-1 4-Methyl-2-pentanone ug/L ND 10	ī
591-78-6 2-Hexanone	ī
127-18-4 Tetrachloroethene ug/L ND 5.0	1
79-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0	ī
108-88-3 Toluene ug/L ND 5.0	ī
108-90-7 Chlorobenzeneug/L ND 5.0	ī
	ī
100-42-5 Styrene ug/L ND 5.0	ī
	ĩ
SURROGATES- In Percent Recovery:	
Dibromofluoromethane	
1,2-Dichloroethane-d4	
Toluene-d8 104 (88 - 110%)	
p-Bromofluorobenzene	•

ogin #L9811029 November 18, 1998 12:38 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811029-02 Client Sample ID: WEIR 1102/COMP. Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Collected: 11/02/98 0930 COC Info: N/A

malyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method	
Otal Suspended Solids	mg/L	20		5.0	1	N/A	DIM	11/05/98	14:00 160.2	

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-02 Client Sample ID: WEIR 1102/COMP. Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

'CLP Extract Date: N/A Extract Date: 11/05/98

Analysis Date: 11/09/98 Time: 18:10

Dil. Type: N/A COC Info: N/A

Date Collected: 11/02/98

Instrument: HP10

Analyst: CDB Lab File ID: 014F0101

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8082/3550 Run ID: R56222

Batch: WG48942

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Aroclor-1221 Aroclor-1232	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
	ROGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	49.0 45.5	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-02 Client Sample ID: WEIR 1102/COMP. Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: N/A

Instrument: HP9

Analyst: ECL Lab File ID: 1320

Method: 8081A\3510C Run ID: R56255 Batch: WG49203

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1
319-85-7	beta-BHC	ug/L	ND	0.05	i
319-86-8	delta-BHC	ug/L	ND	0.05	Ť
58-89-9	gamma-BHC (Lindane)	ug/L	ND	0.05	ī
76 -44 -8	Heptachlor	ug/L	ND	0.05	ī
309-00-2	Aldrin	ug/L	ND	0.05	Ť
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	Ť
959-98-8	Endosulian I	ug/L	ND	0.05	î
60-57-1	Dieldrin	ug/L	ND	0.10	ī
72-55-9	4,4'-DDE	ug/L	ND	0.10	ī
72-20-8	Endrin	ug/L	ND	0.10	า๋
33213-65-9	Endosulfan II	ug/L	ND	0.10	Ť
72-54-8	4,4'-DDD Endosulfan sulfate	ug/L	ND	0.10	7
1031-07-8	Endosulfan sulfate	ug/L	ND	0.10	†
50-29-3	4,4'-DDT	ug/L	ND	0.10	ī
72-43-5	Methoxychlor	ug/L	ND	0.50	†
53494-70-5	Endrin ketone	ug/L	ND	0.10	i
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	Ť
5103-71-9	alpha Chlordane	ug/L	ND	0.05	†
5103-74-2	gamma Chlordane	ug/L	ND	0.05	†
8001-35-2	Toxaphene	ug/L	ND	1.0	†
		49/H	ND	1.0	• •
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	51.8	(13 - 154%)		
	Decachlorobiphenvl	58.4	(25 - 140%)		

ogin #L9811029 Jovember 18, 1998 12:38 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811029-03 Lient Sample ID: MIX 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Collected: 11/02/98 1100

COC Info: N/A

malyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
otal Suspended Solids	mg/L	26		5.0	1	N/A	DLN	11/05/98	14:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-03

Client Sample ID: MIX 1102/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

'CLP Extract Date: N/A Extract Date: 11/05/98

Analysis Date: 11/09/98 Time: 18:46

Dil. Type: N/A COC Info: N/A

Date Collected: 11/02/98

Instrument: HP10

Analyst: CDB Lab File ID: 015F0101 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A Method: 8082/3550

Run ID: R56222 Batch: WG48942

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	43.8 27.5	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-03 Client Sample ID: MIX 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: N/A

Instrument: HP9
Analyst: ECL
Lab File ID: 1321

Method: 8081A\3510C Run ID: R56255 Batch: WG49203

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	7
319-85-7	beta-BHC	ug/L	ND	0.05	1
319-86-8	Qelta-BHC	ug/L	ND	0.05	1
58-89-9	gamma-BHC (Lindane),,,,,,	ug/L	ND	0.05	± 7
76-44-8	Heptachior	ug/L	ND	0.05	1
309-00-2	Aldrin	ug/L	ND	0.05	÷
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	± -
959-98-8	Endosulfan I	ug/L	ND	0.05	, , , , , , , , , , , , , , , , , , ,
60-57-1	Dieldrin	ug/L	ND		‡
72-55-9	4,4'-DDE	ug/L	ND	0.10	÷
72-20-8	Endrin	ug/L	ND	0.10	4
33213-65-9	Endosulfan II	ug/L	ND ND	0.10	‡
72-54-8	4.4'-DDD	ug/L	ND ND	0.10	÷
1031-07-8	Endosulfan sulfate	ug/L	ND	0.10	<u>.</u>
50-29-3	4,4'-DDT	ug/L	ND ND	0.10	-
72-43-5	Methoxychlor	ug/L		0.10	<u> </u>
53494-70-5	Endrin ketone	ug/1	ND	0.50	<u> </u>
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	<u> </u>
5103-71-9	alpha Chlordane	ug/L	ND	0.10	<u> </u>
5103-74-2	gamma Chlordane	ug/L	ND	0.05	<u> </u>
8001-35-2	Toyanhono	ug/L	· ND	0.05	1
0002-33-2	Toxaphene	ug/L	ND	1.0	1
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	40.1	(13 - 154%)		
	Decachlorobiphenyl	29.0	,,		
		25.0	(25 - 140%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-03

Client Sample ID: MIX 1102/GRAB

Dil. Type: N/A

COC Info: N/A

Extract Volume: N/A

CLP Extract Date: N/A Instrument: HPMS5 Method: 8270C\3510C

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	11	2.2	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	11	2.2	
95-57-8	2-Chlorophenol	ug/L	ND .	11	2.2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	11	2.2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	11	2.2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	11	2.2	
95-48-7	2-Methylphenol	ug/L	ND	īī	2.2	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	īĩ	2.2	
106-44-5	4-Methylphenol	ug/L	ND	īī	2.2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	11	2.2	
67-72-1	Hexachloroethane	ug/L	ND ·	11	2.2	
98-95-3	Nitrobenzene	ug/L	ND	11	2.2	
78-59-1	Isophorone	ug/L	ND	ĬĨ	2.2	
88-75-5	2-Nitrophenol	ug/L	ND	11	$\bar{2},\bar{2}$	
105-67-9	2,4-Dimethylphenol	ug/L	ND	īī	2.2	
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	ĩĩ	2.2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	11	2.2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	11	2.2	
91-20-3	Naphthalene	ug/L	ND	īī	2.2	
106-47-8	4-Chloroaniline	ug/L	ND .	īī	2.2	
87-68-3	Hexachlorobutadiene	110 / L	ND	11	$\overline{2},\overline{2}$	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	11	$\frac{1}{2},\frac{1}{2}$	
91-57-6	2 Mathedanhahadana	ug/L	ND	īī	2.2	
77-47-4	2-Methylnaphthalene	ug/L	ND	11	2.2	
88-06-2	Hexachlorocyclopentadiene	ug/L	ND .	11	2.2	
	2,4,6-Trichlorophenol	ug/L	ND	55	2.2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	11	2.2	
91-58-7	2-Chloronaphthalene	ug/L	ND	55	2.2	
88-74-4	2-Nitroaniline	ug/L	ND	11	2.2	
131-11-3	Dimethylphthalate	ug/L	ND	11	2.2	
208-96-8	Acenaphthylene	ug/L	ND	11	2.2	
606-20-2	2,6-Dinitrotoluene	ug/L		55	2.2	
99-09-2	3-Nitroaniline	ug/L	ND	11	2.2	
83-32-9	Acenaphthene	ug/L	ND	55	2.2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	55 55	2.2	
100-02-7	4-Nitrophenol	ug/L	ND	35 11	2.2	
132-64-9	Dibenzofuran	ug/L	ND	11	2.2	
121-14-2	2,4-Dinitrotoluene	ug/L	йD		2.2	
84-66-2	Diethylphthalate	ug/L	ND	11 11	2.2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	11	2.2	

^{. =} Reporting Limit

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Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-03 Client Sample ID: MIX 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/04/98
Analysis Date: 11/11/98 Time: 19:36

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: N/A

Instrument: HPMS5

Method: 8270C\3510C

Analyst: MDC Lab File ID: 8614

Run ID: R56233 Batch : WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	11	2.2
100-01-6	4-Nitroaniline	11 ~ /Y		ND	55	2.2
534-52-1	4,6-Dinitro-2-methylphenol	11ct /T.		ND	55 55	2.2
86-30-6				ND	11	2.2
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	11	2.2
118-74-1	4-Bromophenyl-phenylether. Hexachlorobenzene.	ug/L		ND	11	2.2
87-86-5	Pentachiorophenol	ug/L		ND	55	2.2
85-01-8	Filenanchi ene	ug/L		ND		2.2
120-12-7	Anthracene	ug/L		ND	11 11	2.2
86-74-8	Carpazole	ug/L		ND		2.2
84-74-2	Di-N-Butylphthalate	ug/L		ND	11	2.2
206-44-0	Fluoranthene	ug/L		ND	11	2.2
129-00-0	Pyrene	ug/L		ND	11	2.2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine.	ug/L		ND	11 11	2.2
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	22	2.2
56-55-3	Benzo(a) anthracene	ug/L		ND	11	2.2
218-01-9	Chrysene	ug/L		ND	11	2.2
117-81-7	Chrysenebis(2-Ethylhexyl)phthalate	ug/L		ND	11	2.2
117-84-0	Di-n-octylphthalate	ug/L		ND	11	2.2
205-99-2	Benzo (b) fluoranthene	ug/L		ND		2.2
207-08-9	Benzo (k) fluoranthene	ug/L		ND ND	11	2.2
50-32-8	Benzo (a) pyrene	ng/r		אס מא	11 11	2.2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND		2.2
53-70-3	Dibenzo (a, h) Anthracene	ug/L			11	2.2
191-24-2	Benzo(g,h,i) Perylene	ug/L		ND ND	11	2.2
		ug/L		ND	11	2.2
SURR	OGATES- In Percent Recovery:					
_	2-Fluorophenol	49.0	1 .	21 - 100%)		
	Phenol-d5	29.8		10 - 94%)		
	Nitrobenzene-d5	71.4	• •	35 - 114%)		
	2-Fluorobiphenyl	71.4 76.8	, -	35 - 1148) 13 - 1168)		
	2,4,6-Tribromophenol	108				
	p-Terphenyl-d14			LO - 123%)		
	h - washeenest + . Mrg	89.8	(3	33 - 141%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-03 Client Sample ID: MIX 1102/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

Matrix: Water Date Collected: 11/02/98 % Solid: N/A

FCLP Extract Date: N/A
Extract Date: N/A Instrument: HPMS9 Method: 8260B Analyst: SLT Lab File ID: 9VR00156 Run ID: R55825 Batch: WG49003 Analysis Date: 11/06/98 Time: 16:40

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/L		ND	10	1	
74-83-9	Bromomethane	ug/L		ND	10	1	
75-01-4	Vinyl chloride	uq/L		ND	10	1	
75-00-3	Chloroethane	uq/L		ND	10	1	
75-09-2	Methylene chloride	ug/L		ND	5.0	1	
67-64-1	Acetone	ug/L		ND	10	1	
75-15-0	Carbon disulfide	ug/L		ND	5.0	1	
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1	
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1	
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1	
67-66-3	Chloroform	ug/L		ND	5.0	1	
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1	
78-93-3	2-Butanone	ug/L		ND	10	1	
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	1	
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	ļ	
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1	
78-87-5	1.2-Dichloropropane	ug/L		ND	5.0	1	
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1	
79-01-6	Trichloroethene	ug/L		ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1	
71-43-2	Benzene	ug/L		ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	Ţ	
75-25-2	Bromoform	ug/L		ND	5.0	<u> </u>	
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	Ť	
591-78-6	2-Hexanone	ug/L		ND	10	1 2	
127-18-4	Tetrachloroethene	ug/L		ND	5.0 5.0	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	± -	
108-88-3	Toluene	ug/L		ND	5.0	‡	
108-90-7	Chlorobenzene	ug/L		MD	5.0	<u> </u>	
100-41-4	Ethyl benzene	uġ/Ľ		ND	5.0	<u> </u>	
100-42-5	Styrene	ug/L		ИD	5.0 5.0	1	
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1	
SURR	OGATES- In Percent Recovery:						
	Dibromofluoromethane	104	(86 - 118%)			
	1,2-Dichloroethane-d4	101	(80 - 120%)			
	Toluene-d8	104	. (88 - 110%)			
	p-Bromofluorobenzene	92.1	(86 - 115%)			

[:]L = Reporting Limit

Login #L9811 November 18, 1998 12:38 pm

KEMRON ENVIRON TAL SERVICES

Lab Sample ID: L9811029-04 Client Sample ID: INLET 1102/WATER/GRAB Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Collected: 11/02/98 1100

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	88000		200	40	N/A	DLN	11/05/98	14:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/02/98 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/05/98
Analysis Date: 11/11/98 Time: 11:51

Instrument: HP10

Analyst: CDB Lab File ID: 052R0101

Method: 8082/3550

Run ID: R56338 Batch : WG48942

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2		ug/L		ND	0.95	1.9
11104-28-2	Aroctor-1221	1107/L		ND	0.95	1.9
11141-16-5	Aroclor-1232	ug/L		ND	0.95	1.9
53469-21-9	Aroclor-1242	ug/L		ND	0.95	1.9
12672-29-6	Aroclor-1248	ug/L		ND	0.95	1.9
11097-69-1	Aroclor-1254	ug/L		ND	1.9	
11096-82-5	Aroclor-1260	ug/L		ND	1.9	1.9 1.9
SUR	ROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xvlene	6.66	* (13 - 154%)		
	Decachlorobiphenyl	28.4	C_{2}	25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-04 Client Sample ID: INLET 1102/WATER/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water Date Collected: 11/02/98 % Solid: N/A

[CLP Extract Date: N/A Method: 8081A\3510C Run ID: R56255 Instrument: HP9

Extract Date: 11/05/98 Analyst: ECL Analysis Date: 11/11/98 Time: Lab File ID: 1322 Batch : WG49203

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
319-84-6	alpha-BHC	ug/L	ND	0.10	2	
319-85-7	beta-BHC	uq/L	ND	0.10	2	
319-86-8	delta-BHC	1107/T.	ND	0.10	2	
58-89-9	gamma-BHC (Lindane)	ug/L	ND	0.10	2	
76-44-8	Heptachlor	ug/L	ND	0.10	2	
309-00-2	Aldrin	ug/L	ND	0.10	2	
1024-57-3	Heptachlor epoxide	ug/L	ND	0.10	2	
959-98-8	Endosulfan I.	ug/L	ND	0.10	2	
60-57-1	Dieldrin	ug/L	ND	0.20	2	
72-55-9	4,4'-DDE	ug/L	ND	0.20	2	
72-20-8	Endrin	ug/L	ND	0.20	2	
33213-65-9	Endosulfan II	ug/L	ND	0.20	2	
72-54-8	4,4'-DDD	ug/1	0.35	0.20	2	
1031-07-8	Endosulfan sulfate	ug/L	ND	0.20	ັ້	
50-29-3	A Al-DDT	ug/L	ND	0.20	2	
72-43-5	4,4'-DDT	ug/L	ND	1.0	2	
53494-70-5	Methoxychlor	ug/L	ND	0.20	2	
7421-93-4	Endrin ketone	ug/L	ND	0.20		
5103-71-9	Endrin aldehyde				2	
	alpha Chlordane	ug/L	ND	0.10	2	
5103-74-2	gamma Chlordane	ug/L	ND	0.10	4	
8001-35-2	Toxaphene	ug/L	ND	2.0	4	
SURR	OGATES- In Percent Recovery:				•	
	2,4,5,6-Tetrachloro-m-xylene	9.30) * (13 - 154%)			
	Decachlorobiphenyl	44.7	(25 - 140%) ´			

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: N/A

TCLP Extract Date: N/A Extract Date: 11/04/98 Instrument: HPMS5 Method: 8270C\3510C

Analyst: MDC Lab File ID: 8633 Run ID: R56337 Analysis Date: 11/12/98 Time: 13:23 Batch : WG49078

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	17	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND ND	17	3.3
95-57-8	2~Cniorophenoi	ug/L	ND	17	3.3
541-73-1	1,3-D1Chlorobenzene	ug/L	ND	17 17	3.3
106-46-7	1,4-Dichlorobenzene	ug/L	ND	17	3.3
95-50-1	1,2-Dichlorobenzene	ug/L	ND ND	17	3.3 3.3
95-48-7	2-Methylphenol	ug/L	ND	17	3.3
108-60-1	Pls(2-Chloroisopropyl)ether	ug/L	ND	17	3.3
106-44-5	4-Methylphenol N-Nitroso-di-n-propylamine	ug/L	ND	17	3.3
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	17	3.3
67-72-1		ug/L	ND	17	3.3
98 <i>-</i> 95-3	Nitrobenzene	ug/L	ND	17	3.3
78-59-1	isophorone	ug/L	ND	17	3.3
88-75-5	2~Nitrophenol	ug/L	ND	17	3.3
105-67-9	2,4-Dimethylphenol. Bis(2-Chloroethoxy)Methane	ug/L	ND	17	3.3
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	17	3.3
120-83-2	4.4*Dichiorophenol.	ug/L	ND	17	3.3
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	17	3.3
91-20-3	Naphthalene	ug/L	ND	īź	3.3
106-47-8	4~Chloroaniline	ug/L	ND	17	3.3
87-68-3	Hexachlorobutadiene	ug/L	ND	17	3.3
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	iź	3.3
91-57-6	2-Methylnaphthalene	ug/L	ND	Ĩ7	3.3
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	ī7	3.3
88-06-2	4,4,5-Trichiorophenol	ug/L	ND	īź	3.3
95-95 -4	2,4,5-Trichlorophenol	ug/L	ND	83	3.3
91-58-7	2-Chloronaphthalene	ug/L	ND	17	3.3
88-74-4	2-Nitroaniline	ug/L	ND	83	3.3
131-11-3	Dimethylphthalate	ug/L	, ND	17	. 3.3
208-96-8	Acenaphthylene	ug/L	ND	īż	3.3
606-20-2	2,6-Dinitrotoluene	ug/L	ND	īź	3.3
99-09-2	3-Nitroaniline	ug/L	ND	83	3.3
83-32-9	Acenaphthene	ug/L	ND	17	3.3
51-28-5	2,4-Dinitrophenol	ug/L	ND	83	3.3
100-02-7	4-Nitrophenol	ug/L	ND	83	3.3
132-64-9	Dibenzofuran	ug/L	ND	17	3.3
121-14-2	2,4-Dinitrotoluene	ug/L	ND	17	3.3
84-66-2	Diethylphthalate	ug/L	ND	17	3.3
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	17	3.3

KEMRON ENVIRONMENTAL SERVICES

Jogin #L9811029 November 18, 1998 12:38 pm

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

Date Collected: 11/02/98 % Solid: N/A

Method: 8270C\3510C Instrument: HPMS5

FCLP Extract Date: N/A Extract Date: 11/04/98 Analysis Date: 11/12/98 Time: 13:23 Analyst: MDC Lab File ID: 8633 Run ID: R56337 Batch: WG49078

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	17	3.3
100-01-6	4-Nitroaniline	ug/L		ND	83	3.3
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	83	3.3
86-30-6	N-Nitrosodiphenvlamine	ug/L		ND	17	3.3
101-55-3	4-Bromophenyl-phenylether	ug/L		ИD	· 17	3.3
118-74-1	Hexachlorobenzene	ug/L		ND	17	3.3
87-86-5	Pentachlorophenol	ug/L		ND	83	3.3
85-01-8	Phenanthrene	ug/L		ND	17	3.3
120-12-7	Anthracene	ug/L		ND	17	3.3
86-74-8	Carbazole	ug/L		ИD	17	3.3
84-74-2	Di-N-Butylphthalate	ug/L		ND	17	3.3 3.3
206-44-0	Fluoranthene	ug/L		ND	17	3.3
129-00-0	Pvrene	ug/L		ND	17	3.3
85-68-7	Butylbenzylphthalate	ug/L		ND	17	3.3
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	33	3.3
56-55 - 3	Benzo (a) anthracene	ug/L		ND	17	3.3
218-01-9	Chrysene	ug/L		ND	17	3.3
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	17	3.3
117-84-0	Di-n-octylphthalateBenzo(b) fluoranthene	ug/L		ND	17	3.3
205-99-2	Benzo (b) fluoranthene	ug/L		ND	17	3.3
207-08-9	Benzo(k) fluoranthene	ug/L		ND	17	3.3
50-32-8	Benzo(a) pyrene	ug/L		ND	17	3.3
193-39-5	Indeno (1, 2, 3-cd) pyrene	ug/L		ND	17	3.3
53-70-3	Dibenzo(a,h)Anthracene	ug/L		ND .	17	3.3 3.3
191-24-2	Benzo(g,h,i) Perylene	ug/L		ND	17	3.3
SURR	OGATES- In Percent Recovery:					
55121	2-Fluorophenol	31.5	(21 - 100%)		
	Phenol-d5	21.4	(10 - 94%)		
	Nitrobenzene-d5	39.2		35 - 114%)		
	2-Fluorobiphenyl	18.6	* (43 - 116%)		•
	2,4,6-Tribromophenol	21.9	į (10 - 123%)		
	p-Terphenyl-d14	29.3	* (33 - 141%)		
	h and handle manager and a second sec	_+				

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811029-04
Client Sample ID: INLET 1102/WATER/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A Extract Date: N/A Analysis Date: 11/07/98 Time: 22:20

Date Collected: 11/02/98

% Solid: N/A

Instrument: HPMS2 Analyst: SLT Lab File ID: 2VR27446

Method: 8260B Run ID: R55854 Batch: WG49020

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane				
74-83-9	Bromomethane	ug/L	ND	10	1
75-01-4	Vinyl chloride	ug/L	ND	10	1
75-00-3	Chloroethane	ug/L	ND	10	1
75-09-2	Methylene chloride	ug/L	ND	10	1
67-64-1	Acetone.	ug/L	ND	5.0	1
75-15-0	Carbon disulfide	ug/L	ND	10	1
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	1
75-34-3	1,1-Dichloroethane.	ug/L	ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	1
67-66-3	Chloroform	ug/L	ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	1
78-93-3	2-Butanone	ug/L ug/L	ND	5.0	1
71-55-6	1,1,1-Trichloroethane	ug/L ug/L	ND	10	1
56-23-5	Carbon tetrachloride	ug/L ug/L	MD	5.0	1
75-27-4	BIOMOGICALOromethane	ug/L	ND	5.0	1
78-87-5	1,2-Dichloropropane.	ug/L	ND	5.0	1
10061-01-5	CIS-1,3-DICALOROPRODENE	ug/L	ND	5.0	1
79-01-6	Trichiordernene	ug/L	ND	5.0	1
124-48-1	Dibromochloromethane	ug/L	ND	5.0	Ī
79-00-5	1,1,2-Trichloroethane	ug/L	ND ND	5.0	1
71-43-2	Benzene.	ug/L	ND ND	5.0	Ť
10061-02-6	Crans-1,3-Dichioropropene	ug/L	ND ND	5.0	1
75-25-2	BIOMOLOTM	ug/L	ND ND	5.0 5.0	÷
108-10-1	4-Methyl-2-pentanone	ug/L	ND		1
591-78-6	2-hexanone	ug/L	ND	10 10	<u> </u>
127-18-4	Tetrachloroethene	ug/L	ND ND		÷
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0 5.0	1
108-88-3	Totuene	ug/L	ND	5.0 5.0	1
108-90-7	Chlorobenzene	ug/L	ND ND	5.0 5.0	
100-41-4	Ethyl Denzene	ug/L	ND	5.0	1
100-42-5	Styrene	ug/L	ND	5.0	
1330-20-7	Xylenes, Total	ug/L	ND	5.0	1 1
SURR	OGATES- In Percent Recovery:	ug/2	מא	5.0	1
	Dibromofluoromethane	88.5	(86 - 118%)		
	1,2-Dichloroethane-d4	86.7	(80 - 120%)		
	Toluene-d8	92.3	(88 - 110%)		
	p-Bromofluorobenzene	96.5	(86 - 115%)		

Login #L9811029 November 18, 1998 12:38 pm

TCLP Extract Date: N/A

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-S - PCB's (Soil)

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: 19

Instrument: HP10

Method: 8082/3550

Analyst: CDB

Run ID: R56339

Extract Date: 11/06/98 Analysis Date: 11/11/98 Time: 12:27

Lab File ID: 053R0101

Batch : WG49025

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/kg ug/kg		ND ND ND ND ND ND ND	87 87 87 87 87 170	1 1 1 1 1 1 1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	139 215	* (29 - 133%) 30 - 173%)		·	

Lab Sample ID: L9811029-05 Client Sample ID: INLET 1102/SEDIMENT/GRAB

Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Soil Collected: 11/02/98 1100

142

% Solid: 19

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
Percent Solids	% wt.	19		1.0	1	N/A	DIH	11/06/98	12:45 D2216-90

19 × 18 × 34

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811029-05 Client Sample ID: INLET 1102/SEDIMENT/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Soil

TCLP Extract Date: N/A
Extract Date: 11/06/98
Analysis Date: 11/11/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98

% Solid: 19

Method: 8081A\3550B

Instrument: HP9
Analyst: ECL
Lab File ID: 1315

Run ID: R56256 Batch: WG49204

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/kg	ND	8.7	1
319-85-7	beta-BHC	ug/kg	ND	8.7	1
319-86-8	delta-BHC	ug/kg	ND	8.7	1
58-89-9	gamma-BHC (Lindane)	ug/kg	ND	8.7	1
76-44-8	Heptachlor	ug/kg	ND	8.7	1
309-00-2	Aldrin	ug/kg	ND	8.7	1
1024-57-3	Heptachlor epoxide	ug/kg	ND	8.7	1
959-98-8	Endosulfan I	ug/kg	MD	8.7	1
60-57-1	Dieldrin	ug/kg	ND	17	ī
72-55-9	4,4'-DDE	ug/kg	ND	17	ļ
72-20-8	Endrin	uq/kg	ND	17	1
33213-65-9	Endosulfan II	ug/kg	MD	17	<u>l</u>
72-54-8	4,4'-DDD	ug/kg	31	17	1
1031-07-8	Endosulfan sulfate	ug/kg	ND	17	1
50-29-3	4,4'-DDT	ug/kg	ND	17	1
72-43-5	Methoxychlor	ug/kg	ND	87	1
53494-70-5	Endrin ketone	ug/kg	ND	17	1
7421-93-4	Endrin aldehyde	uq/kg	ND	17	<u>1</u>
5103-71-9	alpha Chlordane	ug/kg	ND	8.7	1
5103-74 - 2	gamma Chlordane	ug/kg	ND	8.7	1
8001-35-2	Toxaphene	ug/kg	ND	170	1
SURROGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene	67.8	(29 - 133%)		
	Decachlorobiphenyl	123	(30 - 173%)		

ogin #L9811029 ovember 18, 1998 12:38 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil Dil. Type: N/A COC Into: N/A

% Solid: 19 Date Collected: 11/02/98

Method: 8270C\3550B Run ID: R56333 Instrument: HPMS4 'CLP Extract Date: N/A

Analyst: MLS Lab File ID: 12105 Extract Date: 11/09/98 Batch: WG49125 Analysis Date: 11/12/98 Time: 12:31

108-95-2 Phenol	CAS #	Compound	Units	 Result	Qualifiers	RL	Dilution	
111-44-4 Bis (2-Chloroethyl) ether	108-95-2	Phenol	ug/kg	 	ND			
95-57-8 2-Chlorophenol. ug/kg ND 1700 2 106-46-7 1.4-Dichlorobenzene ug/kg ND 1700 2 95-50-1 1.2-Dichlorobenzene ug/kg ND 1700 2 95-50-1 1.2-Dichlorobenzene ug/kg ND 1700 2 95-50-1 1.2-Dichlorobenzene ug/kg ND 1700 2 95-48-7 2-Methylphenol. ug/kg ND 1700 2 108-60-1 bis (2-Chloroisopropyl) ether ug/kg ND 1700 2 106-64-5 4-Methylphenol. ug/kg ND 1700 2 106-64-7 N-Nitroso-di-n-propylamine ug/kg ND 1700 2 621-64-7 N-Nitroso-di-n-propylamine ug/kg ND 1700 2 66-22-1 Hexachlorocthane ug/kg ND 1700 2 66-22-1 Hexachlorocthane ug/kg ND 1700 2 68-75-1 Xophorone ug/kg ND 1700 2 105-67-9 2-Nitrophenol ug/kg ND 1700 2 105-67-9 2-Nitrophenol ug/kg ND 1700 2 105-67-9 2-Nitrophenol ug/kg ND 1700 2 105-67-9 2-Nitrophenol ug/kg ND 1700 2 111-91-1 Bis (2-Chlorothoxy) Methane ug/kg ND 1700 2 120-82-1 1,2-4-Trichlorobenzene ug/kg ND 1700 2 120-82-1 1,2-4-Trichlorobenzene ug/kg ND 1700 2 106-47-8 4-Chloroanliine ug/kg ND 1700 2 107-47-4 Hexachlorocyclopentadiene ug/kg ND 1700 2 107-47-4 Hexachlorocyclopentadiene ug/kg ND 1700 2 108-68-3 Hexachlorobtadiene ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-68-3 -2-Linitrophenol ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/kg ND 1700 2 108-69-8 Acenaphthylene ug/k		Bis(2-Chloroethyl)ether			ND		2	
1, 3-Dichlorobenzene		2-Chlorophenol			ND		2	
106-46-7 14-Dichlorobenzene					ND		2	
95-50-1 1,2-Dichlorobenzene			ug/kg		ND		2	
95-48-7 2-Methylphenol. ug/kg ND 1700 2 108-601 bis (2-Chloroisopropyi) ether. ug/kg ND 1700 2 106-44-5 4-Methylphenol. ug/kg ND 1700 2 67-67-1 Hexachloroethane ug/kg ND 1700 2 88-98-95 Nitrobenzene ug/kg ND 1700 2 88-75-5 Nitrobenzene ug/kg ND 1700 2 88-75-5 2-Nitrophenol. ug/kg ND 1700 2 105-67-9 2 4-Dimethylphenol. ug/kg ND 1700 2 105-67-9 2 4-Dimethylphenol ug/kg ND 1700 2 111-91 Bis (2-Chloroethaxy) Methane ug/kg ND 1700 2 120-83-2 2,4-Dichlorophenol ug/kg ND 1700 2 120-83-2 2,4-Dichlorophenol ug/kg ND 1700 2 105-67-8 4-Chloroethaxy Methane ug/kg ND 1700 2 106-47-8 4-Chloroethaxy Methane ug/kg ND 1700 2 10-83-2 2,4-Dichlorophenol ug/kg ND 1700 2 10-83-2 2,4-Dichlorophenol ug/kg ND 1700 2 10-84-8 4-Chloroethaxy Methane ug/kg ND 1700 2 10-87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 91-57-6 2-Methylphenol ug/kg ND 1700 2 91-57-6 2-Methylphenol ug/kg ND 1700 2 91-58-7 4-Chloro-3-methylphenol ug/kg ND 1700 2 91-58-7 4-Chlorophenol ug/kg ND 1700 2 88-06-2 2,4,6-Trichlorophenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chlorophenol ug/kg ND 1700 2 91-58-7 2-Chlorophenol ug/kg ND 1700 2 91-58-7 2-Chlorophenol ug/kg ND 1700 2 91-58-7 2-Chlorophenol ug/kg ND 1700 2 91-58-7 2-Chlorophenol ug/kg ND 1700 2 91-58-7			ug/kg				2	
108-60-1 bis (2-Chloroisopropyl) ether		2-Methylphenol	ug/kg				2	
106-44-5		bis(2-Chloroisopropyl)ether	uď/kď				2	
621-64-7 N-Nitroso-di-n-propylamine ug/kg ND 1700 2 67-72-1 Hexachloroethane ug/kg ND 1700 2 98-95-3 Nitrobenzene ug/kg ND 1700 2 88-75-5 1 Isophorone ug/kg ND 1700 2 88-75-5 2-Nitrophenol ug/kg ND 1700 2 105-67-9 2, 4-Dinethylphenol ug/kg ND 1700 2 111-91-1 Bis(2-Chloroethoxy)Methane ug/kg ND 1700 2 112-83-2 2-Dinethylphenol ug/kg ND 1700 2 120-83-2 2, 4-Dinethylphenol ug/kg ND 1700 2 120-82-1 1, 2, 4-Trichlorophenol ug/kg ND 1700 2 120-82-1 1, 2, 4-Trichlorobenzene ug/kg ND 1700 2 106-47-8 4-Chloroanline ug/kg ND 1700 2 106-47-8 4-Chloroanline ug/kg ND 1700 2 87-68-3 Hexachlorocylamine ug/kg ND 1700 2 87-69-7 4-Chloro-3-methylphenol ug/kg ND 1700 2 91-57-6 2-Methylnaphthalene ug/kg ND 1700 2 91-57-6 4-Chloro-3-methylphenol ug/kg ND 1700 2 88-06-2 2, 4, 6-Trichlorophenol ug/kg ND 1700 2 88-06-2 2, 4, 5-Trichlorophenol ug/kg ND 1700 2 88-75-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 112-64-2 Dinitrophenol ug/kg ND 1700 2 12-14-2 2, 4-Dinitrophenol ug/kg ND 1700 2		4-Methylphenol	ug/kg				2	
Section Sect		N-Nitroso-di-n-propylamine	ug/kg				2	
98-95-3 Nitrobenzene. ug/kg ND 1700 2 88-75-5 2-Nitrophenol. ug/kg ND 1700 2 105-67-9 2,4-Dimethylphenol. ug/kg ND 1700 2 111-91-1 Bis (2-Chloroethoxy)Methane ug/kg ND 1700 2 120-83-2 2,4-Dichlorophenol. ug/kg ND 1700 2 120-83-2 2,4-Dichlorophenol. ug/kg ND 1700 2 120-82-1 1,2,4-Trichlorobenzene ug/kg ND 1700 2 91-20-3 Naphthalene ug/kg ND 1700 2 91-20-3 Naphthalene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 91-57-6 2-Methylnaphthalene ug/kg ND 1700 2 91-58-7 2-Chloro-3-methylphenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-11-11-11-11-11-11-11-11-11-11-11-11-1		Hexachloroethane	ug/kg				2	
78-59-1 Isophorone		Nitrobenzene	ug/kg				2	
88-75-5 2-Nitrophenol ug/kg ND 1700 2 105-67-9 2, 4-Dimethylphenol ug/kg ND 1700 2 111-91-1 Bis(2-Chloroethoxy)Methane ug/kg ND 1700 2 120-83-2 2, 4-Dichlorophenol ug/kg ND 1700 2 120-82-1 1, 2, 4-Trichlorobenzene ug/kg ND 1700 2 91-20-3 Naphthalene ug/kg ND 1700 2 91-20-3 Naphthalene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 87-68-3 Hexachlorobutadiene ug/kg ND 1700 2 91-59-50-7 4-Chloro-3-methylphenol ug/kg ND 1700 2 91-57-6 2-Methylnaphthalene ug/kg ND 1700 2 91-57-6 2-Methylnaphthalene ug/kg ND 1700 2 91-58-0-2 2-4,6-Trichlorophenol ug/kg ND 1700 2 91-58-0-2 2,4,6-Trichlorophenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 813-32-9 Acenaphthene ug/kg ND 1700 2			ug/kg				2	
105-67-9							2	
111-91-1 Bis (2-chloroethoxy) Methane		2.4-Dimethylphenol	ug/kg				2	
120-83-2		Bis (2-Chloroethoxy) Methane	ug/kg				4	
120-82-1 1/2/4-Trichlorobenzene.	120-83-2	2.4-Dichlorophenol	ug/kg				4	
101-20-3		1.2.4-Trichlorobenzene	ug/kg				4	
106-47-8		Naphthalene	ug/kg				4	
87-68-3 Hexachlorobutadiene ug/kg ND 1700 2			ug/kg				4	
59-50-7 4-Chloro-3-methylphenol ug/kg ND 1700 2 91-57-6 2-Methylnaphthalene ug/kg ND 1700 2 77-47-4 Hexachlorocyclopentadiene ug/kg ND 1700 2 88-06-2 2,4,6-Trichlorophenol ug/kg ND 8700 2 95-95-4 2,4,5-Trichlorophenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 1700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran </td <td></td> <td></td> <td>ug/kg</td> <td></td> <td></td> <td></td> <td>4</td> <td></td>			ug/kg				4	
91-57-6 2-Methylnaphthalene. ug/kg ND 1700 2 77-47-4 Hexachlorocyclopentadiene. ug/kg ND 1700 2 88-06-2 2,4,6-Trichlorophenol. ug/kg ND 8700 2 95-95-4 2,4,5-Trichlorophenol. ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene. ug/kg ND 8700 2 88-74-2 -Nitroaniline. ug/kg ND 1700 2 131-11-3 Dimethylphthalate. ug/kg ND 1700 2 1208-96-8 Acenaphthylene. ug/kg ND 1700 2 208-96-8 Acenaphthylene. ug/kg ND 1700 2 99-09-2 3-Nitroaniline. ug/kg ND 1700 2 99-09-2 3-Nitroaniline. ug/kg ND 1700 2 83-32-9 Acenaphthene. ug/kg ND 1700 2 83-32-9 Acenaphthene. ug/kg ND 1700 2 100-02-7 4-Nitrophenol. ug/kg ND 8700 2 100-02-7 4-Nitrophenol. ug/kg ND 8700 2 112-64-9 Dibenzofuran. ug/kg ND 1700 2 121-14-2 1,4-Dinitrotoluene ug/kg ND 1700 2 121-14-2 1,4-Dinitrotoluene ug/kg ND 1700 2 121-14-2 1,4-Dinitrotoluene ug/kg ND 1700 2 184-66-2 Diethylphthalate. ug/kg ND 1700 2			ug/kg				4	
77-47-4 Hexachlorocyclopentadiene ug/kg ND 1700 2 88-06-2 2,4,6-Trichlorophenol ug/kg ND 9700 2 95-95-4 2,4,5-Trichlorophenol ug/kg ND 9700 2 91-58-7 2-Chloronaphthalene ug/kg ND 9700 2 88-74-4 2-Nitroaniline Ug/kg ND 9700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 1700 2 100-02-7 4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 8700 2 112-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 1700 2		2-Methylnaphthalene	ug/kg				2	
88-06-2 2,4,6-Trichlorophenol ug/kg ND 3700 2 95-95-4 2,4,5-Trichlorophenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 8700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene ug/kg ND 8700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug		Hexachlorocyclopentadiene	ug/kg				4	
95-95-4 2,4,5-Trichlorophenol ug/kg ND 1700 2 91-58-7 2-Chloronaphthalene ug/kg ND 8700 2 88-74-4 2-Nitroaniline ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene ug/kg ND 1700 2 99-09-2 3-Nitroaniline ug/kg ND 8700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 1700 2 100-02-7 4-Nitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 132-64-0 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg		2.4.6-Trichlorophenol	ug/kg				*	
91-58-7 2-Chloronaphthalene. ug/kg ND 8700 2 88-74-4 2-Nitroaniline. ug/kg ND 1700 2 131-11-3 Dimethylphthalate. ug/kg ND 1700 2 208-96-8 Acenaphthylene. ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene. ug/kg ND 8700 2 99-09-2 3-Nitroaniline. ug/kg ND 8700 2 83-32-9 Acenaphthene. ug/kg ND 1700 2 83-32-9 Acenaphthene. ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol. ug/kg ND 8700 2 100-02-7 4-Nitrophenol. ug/kg ND 8700 2 132-64-9 Dibenzofuran. ug/kg ND 1700 2 132-64-9 Dibenzofuran. ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene. ug/kg ND 1700 2 84-66-2 Diethylphthalate. ug/kg		2.4.5-Trichlorophenol	ug/kg				2	
88-74-4 2-Nitroaniline ug/kg ND 1700 2 131-11-3 Dimethylphthalate ug/kg ND 1700 2 208-96-8 Acenaphthylene ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene ug/kg ND 8700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg ND 1700 2		2-Chloronaphthalene	ug/kg				2	
131-11-3 Dimethylphthalate Ug/kg ND 1700 2 2 2 2 2 2 2 4 2 2		2-Nitroaniline	uq/kg				4	
208-96-8 Acenaphthylene. ug/kg ND 1700 2 606-20-2 2,6-Dinitrotoluene. ug/kg ND 3700 2 99-09-2 3-Nitroaniline. ug/kg ND 1700 2 83-32-9 Acenaphthene. ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol. ug/kg ND 8700 2 100-02-7 4-Nitrophenol. ug/kg ND 1700 2 132-64-9 Dibenzofuran. ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene. ug/kg ND 1700 2 84-66-2 Diethylphthalate. ug/kg ND 1700 2			ug/kg				4	
606-20-2 2,6-Dinitrotoluene ug/kg ND 8700 2 99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 8700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg ND 1700 2		Acenaphthylene	ug/kg				2	
99-09-2 3-Nitroaniline ug/kg ND 1700 2 83-32-9 Acenaphthene ug/kg ND 8700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg ND 1700 2		2.6-Dinitrotoluene	ug/kg				4	
83-32-9 Acenaphthene ug/kg ND 1700 2 51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg ND 1700 2		3-Nitroaniline	ug/kg				ź	
51-28-5 2,4-Dinitrophenol ug/kg ND 8700 2 100-02-7 4-Nitrophenol ug/kg ND 1700 2 132-64-9 Dibenzofuran ug/kg ND 1700 2 121-14-2 2,4-Dinitrotoluene ug/kg ND 1700 2 84-66-2 Diethylphthalate ug/kg ND 1700 2		Acenaphthene	ug/kg				2	
100-02-7 4-Nitrophenol		2.4-Dinitrophenol	ug/kg				2	
132-64-9 Dibenzofuran		4-Nitrophenol	ug/kg				2	
121-14-2 2,4-Dinitrotoluene		Dibenzofuran	ug/kg				2	
84-66-2 Diethylphthalate ug/kg		2.4-Dinitrotoluene						
		Diethylphthalate	ug/kg				4	
	7005-72-3	4-Chlorophenyl-phenyl ether	ug/kg		ND	1700		

⁽L - Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811029-05
Client Sample ID: INLET 1102/SEDIMENT/GRAB
Site/Work ID: 4119-007/PEDRICKTOWN
Matrix: Soil Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/02/98 % Solid: 19

Instrument: HPMS4

TCLP Extract Date: N/A Extract Date: 11/09/98 Analysis Date: 11/12/98 Time: 12:31 Method: 8270C\3550B Run ID: R56333 Analyst: MLS Lab File ID: 12105 Batch : WG49125

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
86-73-7	Fluorene	ug/kg	ND	1700	2	
100-01-6	4-Nitroaniline	110 /kg	ND	8700	2	
534-52-1	4,6-Dinitro-2-methylphenol. N-Nitrosodiphenylamine.	ug/kg	ND	8700	2	
86-30-6	N-Nitrosodiphenylamine	ug/kg	ND	1700	$\bar{2}$	
101-55-3	4-Bromophenyl-phenylether	ug/kg	ND	1700	$\bar{2}$	
118-74-1	Hexachlorobenzene	ug/kg	ND	1700	$\bar{2}$	
87-86-5	Pentachlorophenol	ug/kg	ND	8700	$\bar{2}$	
85-01-8	Phenanthrene	ug/kg	ND	1700	2	
120-12-7	Anthracene	ug/kg	ND	1700	2	
86-74-8	Carbazole	ug/kg	ND	1700	2	
84-74-2	Di-N-Butylphthalate	ug/kg	ND	1700	2	
206-44-0	Fluoranthene	ug/kg	ND	1700	2	
129-00-0	Pyrene	ug/kg	ND	1700	2	
85-68-7	Butylbenzylphthalate	ug/kg	ND	1700	2	
91-94-1	3,3'-Dichiorobenzidine	ug/kg	ND	3500	2	
56-55-3	Benzo (a) anthracene	ug/kg	ND	1700	2	
218-01-9	Chrysene	ug/kg	ND	1700	2	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/kg	ND	1700	2	
117-84-0	Di-n-octylphthalate	ug/kg	ND	1700	2	
205-99-2	Benzo (b) fluoranthene	ug/kg	ND	1700	2	
207-08-9	Benzo(k) fluoranthene	ug/kg	ND	1700	2	
50-32-8	Benzo(a) pyrene	ug/kg	ND	1700	2	
193-39-5	Indeno (1, 2, 3-cd) pyrene	ug/kg	ND	1700	2 .	
53-70-3	Dibenzo (a, h) Anthracene	ug/kg	ND	1700	2	
191-24-2	Benzo(g,h,i)Perylene	ug/kġ	ND	1700	2	
SURR	OGATES- In Percent Recovery:					
	2-Fluorophenol	37.4	(25 - 121%)			
	Phenol-d5	43.4	(24 - 113%)			
	Nitrobenzene-d5	43.6	(23 - 120%)			
	2-Fluorobiphenyl	49.6	(30 - 115%)			
	2,4,6-Tribromophenol	58.6	(19 - 122%)	·		
	P-Terphenyl-d14	76.2	(18 - 137%)		•	

KEMRON ENVIRONMENTAL SERVICES

ogin #L9811029 November 18, 1998 12:38 pm

Product: 826-TCL - TCL Volatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9811029-05

Client Sample ID: INLET 1102/SEDIMENT/GRAB Site/Work ID: 4119-007/PEDRICKTOWN Matrix: Soil % Solid: 19 Date Collected: 11/02/98

Method: 8260B Instrument: HPMS6

CLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/07/98 Time: 01:23 Run ID: R55846 Analyst: CMS Lab File ID: 6LA11262 Batch: WG49008

CAS #	Compound .	Units	Result Qualifiers	RL.	Dilution	
74-87-3	Chloromethane	ug/kg	ND	53	1	
74-83-9	Bromomethane	ug/kg	ND	53	1	
75-01-4	Vinyl chloride	ug/kg	ND	53	1	
75-00-3	Chloroethane	ug/kg	ND	53	1	
75-09-2	Methylene chloride	ug/kg	ND	26	1	
67-64-1	Acetone	ug/kg	ND	53	1	
75-15-0	Carbon disulfide	uq/kq	ND	26	1	
75-35-4	1.1-Dichloroethene	ug/kg	ND	26	1.	
75-34-3	1.1-Dichloroethane	ug/kg	ND	26	Ī	
540-59-0	1.2-Dichloroethene (Total)	ug/kg	ND	26	Ţ	
67-66-3	Chloroform	ug/kg	ND	26	<u> </u>	
107-06-2	1.2-Dichloroethane	ug/kg	ND	26	- -	
78-93-3	2-Butanone	ug/kg	МD	53	± -	
71-55-6	1,1,1-Trichloroethane	ug/kg	MD	26 26	<u>+</u>	
56-23-5	Carbon tetrachloride	ug/kg	ND	26 26	÷	
75-27-4	Bromodichloromethane	ug/kg	ND	26	1	
78-87-5	1,2-Dichloropropane	ug/kg	ND	26	1	
10061-01-5	cis-1,3-Dichloropropene	ug/kg	ND	26	i	
79-01-6	Trichloroethene	ug/kg	ИD	26	ī	
124-48-1	Dibromochloromethane	ug/kg	ND ND	26	1	
79-00-5	1,1,2-Trichloroethane	ug/kg	ND ND	26	ī	
71-43-2	Benzene	ug/kg	ND	26	ī	
10061-02-6	trans-1,3-Dichloropropene	ug/kg	ND	26	ĩ	
75-25-2	Bromoform	ug/kg	ND	53	ī	
108-10-1	4-Methyl-2-pentanone	ug/kg	ND	53	ī	
591-78-6	2-Hexanone	ug/kg	ND	26	ī	
127-18-4	Tetrachloroethene	ug/kg	ND	26	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	ND	26	1	
108-88-3	Toluene	ug/kg	ND	26	1	
108-90-7	Chlorobenzene	ug/kg	ИD	26	1	
100-41-4	Ethyl benzene	ug/kg	ND	26	1	
100-42-5	Styrene	ug/kg	ND	26	1	
1330-20-7	Xylenes, Total	ug/kg	212			
SURI	ROGATES- In Percent Recovery:		(80 - 120%)			
	Dibromofluoromethane	111	(80 - 120%)			
	1,2-Dichloroethane-d4	117	(81 - 117%)			
	Toluene-d8	TTO	(74 - 121%)			
	p-Bromofluorobenzene	116	(/* - *****			

Lab Sample ID: L9811029-06 Client Sample ID: WEIR 1101/COMP Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water

Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time M	Method
Total Suspended Solids	mg/L	18		5.0	1	N/A	DLN	11/05/98	14:00 1	160.2

Lab Sample ID: L9811029-07 Client Sample ID: WEIR 10/31/COMP Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water Collected: 11/02/98 0930

COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	16	-	5.0	1	N/A	DLN	11/05/98	14:00	160.2

Lab Sample ID: L9811029-08 Client Sample ID: WEIR 10/30/COMP Site/Work ID: 4119-007/PEDRICKTOWN

Matrix: Water Collected: 11/02/98 0930

COC Info: N/A

			··········								
Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method	
Total Suspended Solids	mg/L	24		5.0	1	N/A	DLN	11/05/98	14:00	160.2	_

INORGANIC QA/QC



WORKGROUP:

UNITS:

wg48951

METHOD: 160,2

MATRIX: Wat

Water mg/L RUN DATE: 11/5/98

ANALYST: din

DUPLICATE: 11-029-04

				 _							-						
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	ENT RECO	MS LCL	MS UCL	PERCENT REP RPD	RPD RPD UCL
758	5.00	ND	50.00	43.00	B7880.00	107280.00	NR	NR	NR	86.0	83.5	120.0	NR	NR	NR	19.88	20.00

NOTES & DEFINITIONS :

ROL & REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

ND * NOT DETECTED

NR . NOT REQUIRED

LCS = LAGORATORY CONTROL SAMPLE

T- LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD * RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



Workgroup #: WG49003

Method: 8260A

Matrix: Water Run Date: 11/6/98

LCS2 FLNM: NA LCS DF:

Instrument ID: HPMS_9 BLK FLNM: 9BK00145

SMPL Num: 10-622-08 SMPL FLNM: 9BR00148 SMPL DF: 10

Units: ug/L

BLK2 FLNM: NA MS FLNM: 9BR00149

MS DF: 10

LCS FLNM: 9QC00146

MSD FLNM: 9BR00150

MSD DF: 10

•	1	 				ONCENTRA	TION, PP	8	_					PERC	ENT REC	OVERY			PERCE	NT RE
						LCS Spike	1			MS Spike			LCS	LCS			MS	MS	Ms	RI
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Lovel	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	U:
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	96	%	%	%	96	%	%	%	%	
dichlorodi(luoromethane	10.0	ND	ND	12.4	NA 🔻	20.0	ND ND	10.3	10.6	20.0	61.8	NA .	38.0	148.0	51.3	53.2	: 60.0	140.0		
chloromethane	10,0	ND	ND	18.5	NA .	20.0	ND	16.4	17.6	20.0	92.7	NA	56.0	132.0	82.2	88.2		273.0	3.7	2
vinyl chloride	10.0	ND	ND	25.6	NA .	20.0	ND	22.5	22.4	20.0	128.1	NA :	68.0	125.0	112.3	30.2 3112.0			7.1 0.22.0	20
bromomethane	10.0	ИD	ND	24.9	NA	20.0	ND	22.4	22.7	20.0	124.7	NA	55.0	138.0	112.1	113.7	30 Y 59	251,0 242.0	0,2	2
chloroethane	10.0	ND	ND	21.1	NA .	20.0	ND .	19.6	18.7	20.0	105.6	NA :	57.0	128.0	97.9	93.3	ase tima	997 - 557	1.5 	2 : *: *:
trichlorofluoromethane	10.0	ND	ND	21.1	NA	20.0	ND	18.8	17.6	20.0	105.6	NΑ	70.0	127.0	93.8	87.9	14.0 17.0	230.0	4.8	. 2
freon 113	NTC	ND	ND	NA	NA	20.0	ND	. NA	NA '	20.0	NA	NA .	NA .	NA.	NA NA	NA.		181.0	6.4	2
acatona	100.0	ND	ND	15.7	NA	20.0	14.9	29.8	31.5	20.0	78.7	NA	44.0	114.0	74.7	83.1	70.0 70.0	130,0	NA	2
1,1-dichloroethene	5.0	ND	ND	22.2	NA	20.0	ND :	19.9	18,8	20.0	110.8	NA 3	69.0	144.0	99.3	89803 100 0049	สมราชสม	130.0	5.5	.
iodomethane	NTC	ND	ND	15.7	NA	20.0	ND	14.8	15,1	20.0	78.5	NA	NA NA	NA NA	73.8	94.1 75.6	_ D	234.0	5.4	2
methylene chloride	5.0	ND	ND	23.6	NA	20.0	ND.	. 10 21,1 3	21.5	20.0	117.8	NA	71.0	128.0	105.6	anch on leaster	70.0	130.0	2.3 %%_%_ & &	2 :::::::::
carbon disulfide	5.0	ND	ND	21.6	NA	20.0	ND	18.4	18,7	20.0	108.0	NA.	67.0	136.0	92.2	107.6	D	221.0	1.8	2
acrylonitrile	NTC	ND	ND	NA	NA //	20.0	ND	NA"	NA .	20.0	NA C	NA .	NA .	NA	ugan en gan.	93.7	70.0	130.0	1.6	2
rans-1,2-dichloroethene	5.0	ND	ND	24.0	NA	20.0	ND	22.2	21.8	20.0	120.0	NA	> ''6' (85.0	133.0	NA .	NA	70.0	130.0	NA III	2
vinyl acetate	10.0	ND	ND	19,4	NA	20.0	ND	18.9	19.1	20.0	96.9	NA :	9.0	236.0	110.9	109.0	54.0	156.0	1.7 550 550 550	2 :11
1,1-dichloroethane	5.0	ND	ND	22.6	NA	20.0	ND	21.3	21.3	20.0	112.9	NA	82.0		94.4	95.6	9.0	236.0	1.2	2
2-butanone	100.0	ND :	ND	20.0	NA NA	20.0	. 12.8	30.0	30.2	20.0	100.0	NA 20	43.0	124.0	106.4	106.7	59.0	155.0	0,3	- 2
2.2-dichloropropane	5.0	NĎ	ND	23.3	NA	20.0	ND	21.0	20.3	20.0	116.4	NA.⊞		140.0	.86.8	87.7	70.0	130.0	0.6	2
cis-1,2-dichloroethene	5.0	ND 🌣	ND C	21.4	NA.	20.0	ND	20.4	20.7	20.0	107.0	NA I	77.0	126.0	104.9	101.3	60.0	140.0	3.4	2 37
chloroform	5.0	ND	ND	22.8	NA	20.0	ND	21.4	21.4	20.0	113.8	NA :	69.0 : 83.0	130.0	101.9 107.1	ິ103.3∷ ິ107.2	60.0	140.0	1,4	ं 2

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

Workgroup #: WG49003

Method: 8260A Run Date: 11/6/98

LCS2 FLNM: NA LCS DF:

Instrument ID: HPMS 9 Matrix: Water

BLK FLNM: 98K00145

NA

SMPL Num: 10-622-06 SMPL FLNM: 9BR00148 SMPL DF: 10

Units: ug/L **BLK2 FLNM:** MS FLNM: 98R00149

MS DF: 10 MSD DF: 10

LCS FLNM: 9QC00146

MSD FLNM: 9BR00150

						CONCENTRA	ATION, PPE	3			T			PERC	ENT REC	OVERY			PERCEN	IT RPD
•						LCS Spike	•			MS Spike		· <u>·</u>	LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Lavel	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	22.4	NA	20.0	ND	21.7	22.4	20.0	112.1	NA	85.0	118.0	108.7	111.8	60.0	140.0	2.8	20.0
1,1,1-trichloroethane	5.0	ND	ND∵	23.5	⊗ NA ⊹	20.0	: ND	20.1	19.7	20.0	117.4.	NA	74.0	125.0	100.5	98,3	52.0	162.0	2.2	20.0
1,1-dichloropropene	5.0	ND	ND	23.9	NA	20.0	ND	21.9	21.1	20.0	119.3	NA	85.0	126.0	109.4	105.5	60.0	140.0	3.6	20.0
carbon tetrachloride	5.0	ND	ND	24.9	NA	20.0	ND.	21.5	20.8	20.0	124.5	NA .	73.0	129.0	107.5	104.2	70.0	140.0	3.1	20.0
1,2-dichloroethane	5.0	ND	ND	21.9	NA	20.0	ND	21.6	21.9	20.0	109.3	NA	76.0	123.0	108.0	109.4	49.0	155.0	1.3	20.0
benzene	∞ 5.0 ∞	ND:	⊗ ND	23.2	NA	20.0	ND.	20.7	20.4	20.0	116.1	NA :	86.0	118.0	103.3	102.1	37.0	151.0	1.1	20.0
trichloroethene	5.0	ND	ND	23.2	NA	20.0	ND	20.2	19.7	20.0	116.0	NA.	82.0	120.0	100.8	98.3	71.0	157.0	2.5	20.0
1,2-dichloropropane	5.0	ND	ND.	22.0	. NA	20.0	ND .	21.0	21.2	20.0	110.1	NA NA	74.0	126.0		106.0	,,,,	210.0	0.9	20.0
promodichloromethane	5.0	ND	ND	23,4	NA	20.0	ND	22.5	22.7	20.0	117.1	NA.	74.0	126.0	112.7	113.4	35.0	155.0		
dibromomethane	5.0	ND	ND	21.9	NA	20.0	ND "	21.4	21.7	20.0	109.6	NA.	74.0 78.0 €	125.0	106.8	113.4 108.3	gar A Haringa	April 200	0.6	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.4	NA	20.0	ND	18.4	18.3	20.0	96.8	· · · · · · · · · · · · · · · · · · ·		A SE 3	(4.45.252.9	46.00.000	60.0	140.0		20.0
4-methyl-2-pentanone	10.0	ND	ND.	18.5	NA NA	20.0	ND	24.0				NA	50.0	151.0	92.1	91.6	70.0	130.0	ND	20.0
cis-1,3-dichloropropene	5.0	ND	ND	23.1	NA NA	20.0	ND	21.9	24.9	20.0	92.7	NA :-	79.0	127.0	120.0	124.6	70,0	130.0	3.8	20.0
toluene	5.0	ND	ND	22.0	NA NA	20.0	9.0		22.1	20.0	115.3	NA .	77.0	123.0	109.5	110.7	D SYLDUN	227.0	1,1	20.0
trans-1,3-dichloropropens	5.0	ND	ND	20.4	NA NA	20.0		28.8	28.4	20.0	109.8	NA	83.0	119.0	99,3	96.9	47.0	150.0	1.7	20.0
1,1,2-trichloroethane	5.0	29 1.111	1.6				ND	19.3	19.3	20.0	102.1	NA	74.0	124.0	96.7	96.6	17.0	183.0	0.1	20.0
1. 14/0 - 11/00 to prove out 5. Prod & togged \$6660	special scotts due factor	ND:	ND	20.2	NA .	20.0	ND	19.0	19.0	20.0	101.0	NA	72.0	119.0	95.1	95.2	52.0	150.0	0.1	20.0
2-hexanone	10.0	ND	ND	17.1	NA	20.0	ND	23.2	19.5	20.0	85.6	NA	55.0	114.0	115.9	97.5	70.0	130.0	17.3	20.0
1,3-dichloropropane	5.0	ND	ND	19.6	NA 🐳	20.0	ND	18.8	i 19,1	20.0	98.0	NA.	73.0	122.0	94.2	95,6	60.0	140.0	1.5	20.0
tetrachloroethene	5.0	ND	ND	21.4	NA	20.0	ND	18.8	17.7	20.0	107.2	NA	82.0	120.0	94.1	88.4	64.0	148.0	6.2	20.0
dibromochloromethane	5.0	ND	ND	21.3	NA NA	20.0	ND	20.4	20.6	20.0	106.7	NA	72.0	121.0	101.8	103.0	53.0	149.0	1.2	20.0
Notes and Definitions		Section 1				20.0	,10	20.4	20.0	20.0	100.7	117	72.0	121.0	101.8	103.0	55.0	149.0	1.2	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference



KEMPAN ENVIRONMENTAL SERVICES - OVL VOLANZE QUALITY CONTROL SUMMARY

M8260A 9110698W.XLS

Workgroup #: WG49003

Run Date: 11/6/98

LCS2 FLNM:

NA

LCS DF:

Method: 8260A

Instrument ID: HPMS 9

SMPL Num: 10-622-06

SMPL DF: 10

Matrix: Water Units:

ug/L

BLK FLNM: 9BK00145 **BLK2 FLNM:** NA

SMPL FLNM: 9BR00148

MS DF: 10

MS FLNM: 9BR00149

MSD DF: 10

LCS FLNM: 9QC00146

MSD FLNM: 9BR00150

														·						
		<u> </u>	<u> </u>			ONCENTRA			······································		ļ <u>.</u>			PERC	ENT REC	OVERY			PERCE	NT RPD
	[!				LCS Spike				MS Spike	ł		LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	96	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.1	NA .	20.0	ND	19.3	19.1	20.0	100.4	NA	75.0	121.0	96,6	95.4	60.0	140.0	1.3	20.0
chlorobenzene	5,0	ND	ND	22.1	NA d	20.0	ND	19.5	19,7	20.0	110.4	NA	83.0	120.0	97.5	98.3	37,0	160.0	0.8	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	21.4	NA	20.0	ND	20.0	20.1	20.0	107.2	NA	79.0	118.0	100.2	100.4	60.0	140.0	0.2	20.0
ethylbenzene	5.0	ND	ND	22.1	NA	20.0	·· ND	19.4	18.7	20.0	110.3	NA S	82.0	119.0	96.9	93.7	37.0	162.0	3.4	20.0
m + p-xylene	5.0	ND	ND	44.0	NA	40.0	ND	39.1	38.0	40.0	109.9	NA	81.0	121.0	97.7	94.9	60.0	140.0	2.9	20,0
o-xylene	5.0	ND	ND 1	22.1	NA.	20.0	ND .	20.3	19.6	20.0	110.3	NA	81.0	199.0	101.3	97.9	60.0	140.0	3.5	20.0
styrene	5.0	ND	ND	21.0	NA	20.0	ND	19.8	19.6	20.0	105.0	NA	81.0	118.0	99.0	98.2	60.0	140.0	0.8	20.0
bromoform	5.0	ND	ND	15.9	.NA	20.0	ND	15.4	15.5	20.0	79.4	NA	68.0	129.0	77.0	77.6	45.0	169.0	0.7	20.0
isopropylbenzene	5.0	ND	ND	20.9	NA	20.0	ND	19.1	18.2	20.0	104,6	NA	81.0	121.0	95.4	90.8	60.0	140.0	5.0	20.0
1,1,2,2-tetrachloroethane	5,0	ND	ND	19.6	NA	20.0	ND	19.2	20.0	20.0	98.2	NA .	61.0	137.0	96.2	99.9	46.0	167.0	3.8	20.0
1,2,3-trichioropropane	5.0	ND	ND	19.1	NA	20.0	ND	18.6	19.5	20.0	95.6	NA	72.0	130.0	93.2	97.4	60.0	140.0	178-76382 4.4	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA .	NA .	20.0	NA S	NA	NA.	NA.	NA	NA .	NA .	NA.	NA	20.0
propyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	18.8	18.1	20.0	102.7	NA	69.0	135.0	94.1	90.6	60.0	140.0	3.8	20.0
bromobetizene	5.0	ND	ND	20.5	NA SA	20.0	ND	19.4	19.6	20.0	102.5	NA.	86.0	118.0	97.2	97.8	60.0	140.0	0.6	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.4	NA NA	20.0	ND	19.3	18,9	20.0	101.8	NA	83.0	121.0	96.4	94.3	60.0	140.0	2.2	20.0
2-chlorotolyene	5.0	ND	ND	20.2	NA .	20.0	ND.	19.6	20.6	20.0	100.9	NA .	80.0	126.0	98.2	103.1	60.0	140.0	esteren renormana.	20.0
4-chlorotoluene	5.0	ND	ND	20.3	NA	20.0	ND	18.3	17.2	20.0	101.7	NA	80.0	125.0	91.6	85.8	60.0	140.0	4.9 6.5	20.0
tert-butyl-benzene	5.0	ND	ND	20.7	NA NA	20.0	ND	19.3	18.5	20.0	103.4	NA NA	79.0	78. T. H. P	96.3	warner in the	gri i minoriga	ske rokake	9300 H 1994-9	geret e
1.2.4-trimethylbenzene	5.0	ND	ND	20.5	NA	20.0	ND	19.9					1777.	114.0	1,14,17,14	92.3	60.0	140.0	(4,3 <u>)</u>	20.0
10-50-46/1: 051.5.15:59 Then \$16660, 154 (\$566, 4666)	5.0	685554664	5,4486/15 - 4-485 ₀ 0	WASSES 4 5 5 50	26606611712-202013-3	فيدا أالمارج وي		19.1	19.7	20.0	102.3	NA	84.0	121.0	99.3	98.5	60.0	140.0	0.8 *****	20.0
sec-butyl-benzene	W-910 (A.)	ND N	ND	20.0	NA NA	20.0	ND	18.2	17,4	20.0	100.0	··· NA	81.0	122.0	<u>~91.1~</u>	87.0	60.0	140.0	** 4.5 ° °	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Umit

UCL = Upper Control Limit

RPD = Relative Percent Difference

8260

Workgroup #: WG49003

Run Date: 11/6/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A

Instrument ID: HPMS_9

SMPL Num: 10-622-06

200 01.

Matrix: Water

BLK FLNM: 9BK00145

SMPL FLNM: 9BR0014B

SMPL DF: 10

Units: ug/L

BLK2 FLNM: NA

MS FLNM: 9BR00149

MS DF: 10

inits: ug/L

LCS FLNM: 9QC00146

MSD FLNM: 9BR00149

MSD DF: 10

					C	ONCENTRA	TION, PPB				}			PERCE	NT REC	DVERY			PERCEN	NT RPD
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	
p-isopropyl-toluene	5.0	ND	NO	19.7	NA	20.0	ND	18,2	17.5	20.0	98.6	NA	80.0	119.0	91.0	87.3	60.0	140.0	4.1	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND .	19.3	19.3	20.0	100.9	NA A	85.0	119.0	96.7	96.3	60.0	140.0	0.4	9.41
1,4-dichlorobenzene	5.0	ND	ND	19.9	NA	20.0	ND	19.0	18.7	20.0	99.3	NA	82.0	122.0	94.9	93.7	18.0	190.0	1.3	20.0
n-butyl-benzene	5,0	ND	ND	20.5	NA .	20.0	ND	18.5	17.8	20.0	102.5	NA	80.0	125.0	92.7	88.8	60.0	140.0	4.3	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.8	NA	20.0	ND	19.5	19.7	20.0	104.2	NA	86.0	119.0	97.5	98.5	19.0	190.0	1.0	20.0
,2-dibromo-3-chloropropane	5.0	ND	ND	16.0	NA	20.0	ND	16.5	16.4	20.0	80,2	NA .	66.0	134.0	82.3	81.8	60.0	99,000	0.6	
1,2,4-trichlorobenzene	5.0	ND	ND	19,5	NA	20.0	ND	18.7	18.9	20.0	97.4	NA	78.0	122.0	93.6	94.3	60.0	140.0	0.7	20.0
hexachlorobutadiene	5.0	ND	ND	19.1	NA NA	20.0	ND	17.2	16.8	20,0	95.5	NA	73.0	125.0	86.2	84.2	60.0	90,000 1 11 149 4	2.4	20.0
napthalene	10.0	ND	ND	18.7	NA	20.0	ND	20.1	18.5	20.0	93.4	NA.	74.0	148.0	100.3	92.3	60.0	140.0	8.3	20.0
1.2,3-trichlorobenzene	5.0	ND	ND	19.3	NA	• -	•	5.5 613	19,5	20.0	96,3	NA	74.0	124.0	A 100 300	97.6	9560-K111 K11596	140.0	23.7	

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

Workgroup #: WG49008

Run Date: 11/6/98

LCS2 FLNM; NA LCS DF:

Method: 8260A Matrix: Soil

Instrument ID: HPMS_6

SMPL Num: 10-585-13

SMPL DF:

Units:

ug/kg

BLK FLNM: 6BK11248 BLK2 FLNM: NA

SMPL FLNM: 6LA11250 MS FLNM: 6LA11251.D

MS DF:

MSD DF:

LCS FLNM: 6QC11249.D MSD FLNM: 6LA11252.D

	1	⊢—				<u> VCENTRA</u>	TION, PF	B			<u> </u>			PERCE	NT REC	OVERY			PERCE	ENT RP
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPC
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%						
dichlorodifluoromethane	10.0	ND	ND	19,5	NA.	20.0	ND	19.3	18.6	20.0	97.3	NA :	46.0	152.0	96.3	%	<u>%</u>	<u>%</u>	%	%
chloromethane	10.0	ND	[^] ND [^]	19.0	NA	20.0	ND	18.7	17.8	20.0	95.1	NA.	64.0	140.0		93.1	46.0	152.0	,3A	20.0
vinyl chloride	10.0	ND	ND	20.9	® NA ∵ ∛	20.0	ND	21.5	20.1	20.0	104.7	NA:	70.0	137.0	93.7 107.6	89.1	64.0	140.0	5.0	20.0
bromomethane	10.0	ND	ND	23,6	NA	20.0	ND	22.4	21.4	20.0	118.1	NA.	62.0	147.0		100.6	70.0	137,0	6.7	20,0
chloroethane	10,0	ND	ND	22.0	NA	20.0	ND	22.1	21.0	20.0	1121	NAS	69.0	963 955.5	111.9	107.2	62.0	147.0	4.3	20.0
trichlorofluoromethane	10.0	ND	ND	22.1	NA	20.0	ND	21.9	20.8	20.0	110.5	∷ NA	70.0	136.0	110,5	104.8	69,0	136.0	5.3	20.0
freon 113	10.0	ND	ND	NA	NA	20.0	ND	NA .	NA P	20.0	NA	NA	/U.U ିNA∷ି	134.0 NA	109.5	103.8	70.0	134.0	5.3	20.0
acelone	100.0	ND	ND	23.1	NA	20.0	ND	20.1	20.9	20.0	115.4	NA	40.400	171.0	NA S	NA	NA	NA.	NA .	20.0
1,1-dichloroethene	5.0	ND	ND	21.5	NA	20.0	ND (21.2	20.5	20.0	107.7	A	14.0	ari i ii Ta	100.5	104.5	14.0	171.0	3.9	20.0
iodomethane	10.0	ND	ND	18.1	NA	20.0	ND	17.8	18.5	20.0	90.4	NA .	70.0	140.0	105,9	103.0	70.0	140.0	2.7	20.0
methylene chloride	5.0	ND	ND	21.1	NA NA	20.0	ND :	20.8	20.9	20.0	2 7 3 9 3	NA	50.0	150.0	89.2	92.5	50.0	150.0	3.6	20.0
carbon disulfide	5.0	ND	ND	22.1	NA	20.0	ND	20.7	20.3	20.0	105.6	NA S	\$7.0\$	146.0	103.9	104.4	57.0	146,0	0,4	20.0
acrylonitrile	100.0	ND	ND	NA .	NA	20.0	ND		NA		110.6	NA	69.0	125.0	103.7	101.7	69.0	125.0	1.9	20.0
Irans-1,2-dichloroethene	5.0	ND	ND	22.8	NA.	20.0	ND	22.1	NA 21.4	20.0	NA	NA .	NA :	NA	. NA	NA	NA .	NA	NA .	20.0
vinyl acetate	10.0	ND	ND	24.9	NA .	20.0	ND .	17.9	∡1.9 18.5	20.0	114.0	NA	75.0	141.0	110,3	106.8	75.0	141.0	3.2	20.0
1.1-dichloroethane	5.0	ND	ND	22.1	NA	20.0	ND	21.4	20.7	20.0	124.5	NA :	D	132.0	89.6	92.5	}∘ D∨ ∶	ୀ32.0	3.2	20.0
2-butanone	100.0	ND	ND	21.2	NA S	20.0	ND 11			20.0	110.6	NA Car	79.0	125,0	107.1	103.7	79.0	125.0	3.2	20.0
2,2-dichloropropane	5.0	ND	ND	21.1	NA NA	20.0	ND ND	17.3	18.2	20.0	106.2	NA	28.0	173.0	86.3	91.0	28.0	173.0	5.4	20.0
cis-1,2-dichloroethene	5.0	ND	ND.	21.2	NA SOC			20.6	19.9	20.0	105.7	NA	69.0	128.0	103.1	99.5	69.0	128.0	3.5	20.0
chloroform	5.0	ND	ND	<i>414</i> 21.7	NA SE	20.0	ND	20.2	20.1	20,0	105.9		.75.0	125.0	100.9	100.3	75.0	125.0	0.6	20.0
oles and Definitions:	<u> </u>	10	עויי	21,7	IVA	20.0	ND	21,1	20.4	20.0	108.5	NA	78.0	124.0	105.3	101.9	78.0	124.0	3.3	20.0

RDL≃ Reporting Detection Limit

ND= Not Detected NA= Not Applicable

BLK≃ Method Blank

BLK2= Second Method Blank

LCS[®] Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL^{III} Lower Control Limit

UCL[™] Upper Control Limit

RPD= Relative Percent Difference

 $\langle \vec{i} \rangle$

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49008

Run Date: 11/6/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A Matrix: Soil Instrument ID: HPMS_6 BLK FLNM; 6BK11248 SMPL Num: 10-586-13 SMPL FLNM: 6LA11250 SMPL DF: MS DF:

Units: ug/kg

BLK2 FLNM: NA

MS FLNM: 6LA11251.D

MSD DF: 1

LCS FLNM: 6QC11249.D MSD FLNM: 6LA11252.D

					CC	NCENTR/	ATION, PP	В						PERCE	NT REC	OVERY			PERCE	NT RPC
						LCS Spike	∌			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ΝD	ND	21.7	NA	20.0	ND	20.3	19.8	20.0	108.3	NA	78.0	125.0	101.3	98.8	78.0	125.0	2.4	20.0
1,1,1-trichloroethane	5.0	ND	ND O	21.3	NA »	20.0	ND	21.0	20.2	20.0	106,3	∷ NA	77.0	124.0	104.9	100,8	77.0	124.0	4.0	20.0
1,1-dichloropropene	5.0	ND	ND	22.7	NA	20.0	ND	22.2	21.2	20.0	113.5	NA	85.0	132.0	110.9	106,1	85.0	132.0	4.4	20.0
carbon letrachloride	5.0	ND	ND	22.0	NA .	20.0	ַ סא	21.5	20.7	20.0	109.8	NA :	୍ଦ 77.0 ୬	126.0	107.6	103.4	77,0	126,0	4,0	20.0
1,2-dichloroethane	5.0	ND	ND	21.5	NA.	20.0	ND	20.0	19.8	20.0	107.3	NA	75.0	126.0	99.9	98.8	75.0	126.0	1.2	20.0
benzene	5,0	ND	ND	22.1	NA	20.0	ND	21.0	20.3	20.0	110.6	NA .	81.0	122.0	104.8	101.4	81.0	122.0	3.3	20.0
trichloroethene	5.0	ND	ND	21.7	NA	20.0	ND	21.0	20.4	20.0	108,7	NA	81.0	123.0	105.2	101.8	81.0	123.0	3.2	20.0
1,2-dichloropropane	5.0	ND	ND	21,1	NA .	≥ 20.0 €	ND	20.1	19.7	20.0	105,3	NA	79.0	125.0	100.7	98.4	79.0	125.0	2.3	20.0
bromodichloromethane	5.0	ND	ND	21.9	NA	20.0	ND	20.9	20.5	20.0	109.5	, NA	81.0	123.0	104,5	102.5	81.0	123.0	1.9	20.0
dibromomethane	5,0	ND	ND	21.6	NA NA	20.0	ND	19.8	19.5	20.0	107.8	NA :	0.08	126.0	99.1	97.6	80.0	126.0	1.6	20.0
2-chloroethylvinyl-ether	5.0	ND	ND	40.9	NA	20.0	ND	31.9	33.3	20.0	204,3	NA	50.0	151.0	159.3	166.7	50.0	151.0	4.6	20.0
4-methyl-2-pentanone	10.0	מא	ND	18.1	NA .	20.0	ND	15,7	15.7	20.0	90.7	NA	38.0	162.0	78.4	78.4	38.0	162.0	0.0	20.0
cis-1,3-dichloropropene	5.0	ND	ND	22.3	NA	20.0	ND	20.8	20.6	20.0	111.4	NA	81.0	124.D	104.2	102.8	81.0	124.0	1.4	20.0
toluene	5.0	ND	ND	22.6	NA .	20.0	ND	21.3	20.5	20.0	112,9	NA	80.0	124.0	106.6	102.7	80.0	124.0	3.7	20.0
trans-1,3-dichloropropene	5.0	ND	ND	21.1	NA	20.0	ND	19.6	19.3	20.0	105.7	NA	80.0	122.0	97.9	96.3	80.0	122.0	1.6	20.0
1,1,2-trichloroethane	5.0	ND	ND	21.5	NA	20.0	ND	19.8	19.4	20.0	107.6	NA :	79.0	123.0	0.00	97.0	79.0	123.0	2,8	20,0
2-hexanone	10.0	ND	ND	16.7	NA.	20.0	ND	14.5	14.6	20.0	83,5	NA	31.0	149.0	72.3	73.2	31.0	149.0	1.2	20.0
1,3-dichloropropane	5.0	ND	ND	21.7	NA .	20.0	ND	19.8	19.8	20.0	108.4	NA.	79.0	123.0	98.9	99.0	79.0	123,0	0.1	20,0
tetrachloroethene	5.0	ND	ND	21,6	NA	20.0	ND	21.0	20.1	20.0	108.0	NA	80.0	122.0	104.8	100,4	80.0	122.0	4.3	20.0
dibromochloromethane	5.0	ND	ND	21.5	NA	20.0	ND	20.0	20.0	20.0	107.3	NA	81.0	122.0	100.1	100.1	81.0	122.0	0.0	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND= Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCSª Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

KEMROLENVIRONMENTAL SERVICES - OVL VOLATHE QUALITY CONTROL SUMMARY

Page 3 of 4 M8260A 06985.XLS

Workgroup #: WG49008

Run Date: 11/6/98

LCS2 FLNM:

LCS DF:

Method: 8260A

Instrument ID: HPMS_6

SMPL Num: 10-586-13

SMPL DF: 1

Matrix: Soil Units: ug/kg BLK FLNM: 6BK11248

MS DF: 1

BLK2 FLNM: NA

SMPL FLNM: 6LA11250

MS FLNM: 6LA11251.D

LCS FLNM: 6QC11249.D MSD FLNM: 6LA11252.D

MSD DF: 1

					- 00	NCENTRA	TION, PP	В						PERCE	NT REC	OVERY			PERC	ENT RP
		ł				LCS Spike	•			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	ՍԸԼ
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	<u>%</u>	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	21.4	NA	20.0	ND	19.5	19.5	20.0	107.2	NA	79.0	125,0	97.4	97.7	79.0	125.0	0.3	20.0
chlorobenzene	5.0	י סא	ON	21.18	NA :	20.0	ND	20.3	19.7	20.0	105.7	NA	82.0	124.0	101.7	98.7	82.0	124.0	3.0	20.0
1,1,1,2-letrachioroethane	5.0	ND	ND	21.5	NA	20.0	ND	20.6	20.2	20.0	107.3	NA	80.0	124,0	102.8	101.1	80.0	124.0	1.7	20.0
ethylbenzene	5.0	ND:	ND	21.7	. NA	20.0	ND	21.2	20.2	20.0	108.7	NA	78.0	127.0	106.0	100.9	78.0	127.0	. 4.9	20.0
m+p-xylene	5.0	DИ	ND	43.3	NA	40.0	ND	41.9	40.4	40.0	108.2	NA	B1.0	124,0	104.7	101,1	B1.0	124.0	3.5	20.0
o-xylene	5,0	ND	ND	21.8	NA	20.0	ND	. 21.1	20.5	20.0	108.9	NA	83.0	124.0	105.5	102.7	83.0	124.0	2.6	20.0
styrena	5.0	ND	ND	21.6	NA	20.0	ND	20.9	20.3	20.0	108.2	NA	80.0	122,0	104.6	101.6	80.0	122.0	2.9	20.0
bromaform	5,0	NO	NO	20.0	NA	20.0	dИ	18.1	18.0	20.0	99.9	NA	67.0	134.0	90.3	89.9	67.0	134.0	0.4	20.0
isopropylbenzene	5.0	ND	ND	21.5	NA	20.0	ND	21.3	20.4	20.0	107.7	NA	82.0	124.0	106.6	102.1	82.0	124.0	4.3	20.0
1,1,2,2-leirschloroethane	5.0	ND	NO	21.5	NA	20.0	ND	19.1	19.0	20.0	107.5	NA :	71.0	136,0	95.7	95.1	71.0	136.0	0.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.5	NA	20.0	ND	19.1	19.2	20.0	107.7	NA	70.0	139,0	95.4	96.1	70.0	139.0	8.0	20.0
ans-1,4-dichloro-2-bulene	5.0	ND	ND	NA	NA	20.0	ND	NA:	NA	20.0	NA .	NA ?	NA :	NA :	NA	NA	NA	NA	NA :	NA
propyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	20.5	19.7	20.0	104.9	NA	79.0	124.0	102.6	98.6	79.0	124.0	4.0	20.0
bromobenzene:	5,0	ND	ND	21.1	NA	20.0	ďИ	20.0	19.5	20.0	105.5	NA ·	0.08	122.0	99.9	97.6	0,08	122.0	2.3	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.4	NA	20.0	ND	20.8	20.3	20.0	107.1	NA	82.0	123,0	104.2	101.3	82.0	123.0	2.9	20.0
2-chlorololuene	5,0	ND	ОИ	21.0	NA .	20.0	ND	20.2	19.9	20.0	105.0	NA	77.0	126,0	101.1	99.6	77.0	126.0	1.5	20.0
4-chlorololuene	5.0	ND	ND	21.8	NA	20.0	ND	21.0	20.0	20.0	109.2	NA	60.0	124.0	105.0	99,9	80.0	124.0	4.9	20.0
tert-bulyl-banzene	5.0	ND	ND	20.3	NA .	20.0	ND	19.9	19.3	20.0	101.7	NA .	78.0	122.0	99.7	96.4	78.0	122.0	3.3	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	21.2	NA	20.0	ND	20.5	19.7	20.0	106.1	NA	83.0	123.0	102.6	98.4	83.0	123.0	4.2	20.0
sec-butyl-benzene	≫ 5.0 ×	ND **	ND	21.0	NA NA	20.0	ND	20.7	19.9	20.0	104.9	NA	80.0	124.0	103.5	99.5	80.0	124.0	ે 3.9 ં	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND= Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

8260SL

Workgroup #: WG49008

Run Date: 11/6/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Matrix: Soil

Instrument ID: HPMS_6

SMPL Num: 10-586-13

SMPL DF:

BLK FLNM: 6BK11248

SMPL FLNM: 6LA11250

MS DF:

Units: ug/kg

BLK2 FLNM:

MS FLNM: 6LA11251.D

MSD DF: 1

LCS FLNM: 6QC11249.D MSD FLNM: 6LA11252.D

		<u></u>			CON	CENTRA	TION, PP	В			<u> </u>			PERCE	NT REC	OVERY			PERCE	ENT RPO
		•			l,	.CS Spike		···		MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LÇS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.4	NA	20.0	ND	20.0	19.2	20.0	101.8	NA	77.0	124.0	100.1	96.0	77.0	124.0	4.2	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.8	NA .	20.0	ND	19.8	19.2	20.0	103.8	NA .	82.0	120.0	99.0	96,1	82.0	120.0	3.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	19.3	18.7	20.0	102.0	NA	81.0	121.0	96.6	93.4	81.0	121.0	3.3	20.0
n-butyl-benzene	5.0	ND	ND	21,0	NA .	20.0	ND.	20.5	19.5	20.0	105.1	NA	81.0	125.0	102.6	97.4	81.0	125.0	5.2	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.2	NA	20.0	ИD	19.8	19.5	20.0	106.1	NA	84.0	122.0	98.9	97.6	84.0	122.0	1.3	20.0
,2-dibromo-3-chloropropane	5.0	ND	ND	19.5	NA	20.0	ND	16.8	17.0	20.0	97.7	NA.	55.0	155.0	84.2	84.8	55,0	155.0	0.8	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20.3	NA	20.0	ND	18.9	18.0	20.0	101.4	NA	78.0	124.0	94.6	90.1	78.0	124.0	4.9	20.0
hexachlorobutadiene	5.0	ND	ND	20,9	NA	20.0	ND	20.4	19.8	20.0	104,4	NA	73.0	127.0	102.1	98.9	73.0	127.0	3.2	20.0
napthalene	10.0	Ю	ND	20.2	NA	20.0	ИD	17.9	18.2	20.0	100.9	-NA 3	56.0	152.0	89.6	91.0	56.0	152.0	1,6	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	20.4	NA	20.0	ND	18.8	18.3	20.0	102.2	NA	76.0	128.0	94.0	91.7	76.0	128.0	2.4	20.0

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL≠ Upper Control Limit

RPD= Relative Percent Difference

ND= Not Detected

NA≖ Not Applicable

RDL= Reporting Detection Limit

BLK= Method Blank

Workgroup #: WG49020

Method: 8260A

Matrix: Water Run Date: 11/7/98

LCS2 FLNM: NA LCS DF:

Instrument ID: HPMS_2

SMPL Num: 10-621-01

SMPL DF: 10

Units: ug/L

BLK FLNM: 28K27430 **BLK2 FLNM:** NA

SMPL FLNM: 2BR27434 MS FLNM: 2BR27435.D

MS DF: 10 MSD DF: 10

LCS FLNM: 2QC27431.D

MSD FLNM: 2BR27436.D

						ONCENTRA	ATION, PPB	1			<u> </u>			PERC	ENT REC	OVERY			PERCEN	NT RPD
						LCS Spike)			MS Spike		_ -	LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Levei	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	NO	ND	17.1	NA	20.0	ND	16.6	15.5	20,0	85.6	NA	38.0	148.0	83.0	77.3	60.0	140.0	7.1	20.0
chloromethane	10.0	ND	ND	15.8	NA	20.0	ND	15.6	14.9	20.0	78.8	NA	56.0	132.0	77.8	74.3	D	273.0	4.5	20.0
vinyl chlorida	10.0	ND	ND	17.1	NA.	20.0	ND	15.4	15.1	20.0	85.3	NA .	68.0	125.0	76.8	75.6	Ð	251.0	1.6	20.0
bromomethane	10.0	ND	ND	21.6	NA	20.0	ND	20.2	20.6	20.0	107.8	NA	55.0	138.0	100.8	102.8	D	242.0	2.0	20.0
chloroethane	10.0	ND	ND	19.2	NA	20.0	NO	17.4	17.2	20.0	98.0	NA.	70.0	128.0	86.9	86.0	14.0	230.0	1.1	20.0
trichlorofluoromethane	10.0	ND	ND	19.8	NA	20.0	ND	18.5	17.4	20.0	99.1	NA	70.0	127.0	92.5	87.1	17.0	181.0	6.0	20.0
frean 113	NTC	ND	ND .	NA :	NA	20.0	ND.	NA	NA	20.0	NA	. NA∴	NA	NA	NA .	NA .	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	9.9	NA	20.0	ND	17.4	19.3	20.0	49.6	NA	44.0	114.0	87.2	96.5	70.0	130.0	10.1	20.0
1,1-dichloroethene	5.0	ND	ND	19.0	NA	20.0	ND	18.1	17,4	20.0	94.8	NA	69.0	144.0	90.5	87.2	D	234.0	3.7	20.0
iodomethane	NTC	ND	ND	21.4	NA	20.0	ND	19.3	18.1	20.0	107.1	NA	NA	NA	96.3	90.7	70.0	130.0	6.0	20.0
methylane chloride	5.0	NO	ND	18.4	NA	20.0	ND	17.5	17.4	20.0	92.1	NA :	71.0	128.0	87.7	87.2	ರ	221.0	0.6	20.0
carbon disulfide	5.0	ND	ND	21.9	NA	20.0	ND	22.0	21.6	20.0	109.6	NA	67.0	136.0	109.8	107.9	70.0	130.0	1.7	20.0
acrylonitrile	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA .	NA.	NA	NA .	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	22.6	NA	20.0	ND	22.1	21.4	20.0	112.9	NA	85.0	133.0	110.4	107.1	54.0	156.0	3.0	20.0
vinyl acetate	10.0	ND :	ND	20.7	NA	20.0	ND	0.7	0.0	20.0	103.6	NA .	9.0	236.0	3.6	0.0	9.0	236.0	200.0	20.0
1,1-dichloroethane	5.0	ND	ND	21.5	NA	20.0	ND	22.0	20.8	20.0	107.6	NA	82.0	124.0	109.8	104.0	59.0	155.0	5.4	20.0
2-butanone	100.0	ND	ND	15.9	NA	20.0	מא	18.7	18.9	20.0	79.5	NA .	43.0	140.0	93.4	94.5	70.0	130.0	3.1	20,0
2,2-dichloropropane	5.0	ND	ND	20.3	NA	20.0	ND	19.9	19.2	20.0	101.5	NA	77.0	126.0	99.7	96.1	60.0	140.0	3.6	20.0
cis-1,2-dichloraethene	5.0	ND	ND	20.2	NA	20.0	ND	20.0	19,4	20.0	100.9	NA	69,0	130.0	99.9	96.9	60.0	140.0	3.1	20.0
chloroform	5.0	ND	ND	20.6	NA	20.0	ND	20.5	20.0	20.0	103.1	NA	83.0	121.0	102.7	100.0	51.0	138.0	2.7	20.0

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49020

8260A

Run Date: 11/7/98

LCS2 FLNM: NA LCS DF:

Method: Matrix: Water Instrument ID: HPMS 2 **BLK FLNM: 2BK27430**

SMPL Num: 10-621-01 SMPL FLNM: 28R27434 SMPL DF: 10

Units:

ug/L

BLK2 FLNM: NA

MS DF: 10

MS FLNM: 2BR27435.D

MSD DF: 10

LCS FLNM: 20C27431.D

MSD FLNM: 28R27436.D

					C	ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCEN	VT RPD
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPO
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.8	NA	20.0	ND	20.1	19.7	20.0	104.0	NA	85.0	118.0	100.4	98.5	60.0	140.0	2.0	20.0
1,1,1-trichioroethane	5.0	ND	ND	20.3	NA	20.0	ND	20.5	19.6	20.0	101.7	NA .	74.0	125.0	102.5	98.1	52.0	162.0	4.3	20.0
1,1-dichloropropene	5.0	МD	ND	23.0	NA	20.0	ND	23.2	22.1	20.0	115.0	NA	85.0	126.0	115.8	110.7	60.0	140.0	4.5	20.0
carbon tetrachloride	5.0	ND	ND	20.4	NA	20.0	ND	20.3	19.5	20.0	102.0	NA .	73.0	129.0	101.3	97.4	70.0	140.0	3.9	20.0
1,2-dichloroethane	5.0	В	ND	20.8	NA	20.0	ND	21.8	21.4	20.0	103.9	NA	76.0	123.0	109.2	106.9	49.0	155.0	2.1	20.0
benzene	5.0	ND	ND	21.2	NA	20.0	ND	21.4	20.9	20.0	106.0	NA	86.0	119.0	107.2	104.3	37.0	151.0	2.7	20.0
trichloroethene	5.0	ND	ND	20.5	NA	20.0	ND	29.0	32.3	20.0	102.7	NA	82.0	120.0	145.0	161.5	71.0	157.0	10.7	20.0
1,2-dichloropropane	5.0	ND	ND	20.9	NA	20.0	ND	22.0	22.1	20.0	104.5	○ NA	74.0	126.0	110.1	110.4	D	210.0	0.3	20.0
bromodichloromethane	5.0	ND	ND	19.7	NA	20.0	ND	19.9	20.5	20.0	98.6	NA	74.0	126.0	99.6	102.6	35.0	155.0	2.9	20.0
dibromomethane	5.0	ND	ND	20,7	NA	20.0	AD.	21.7	21.7	20.0	103.3	NA.	78.0	125.0	108.3	108.5	60.0	140.0	0.2	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	19.7	NA	20.0	ND	22.5	23.0	20.0	98.5	NA	68.0	144.0	112.6	115.0	70.0	130.0	2.1	20.0
4-methyl+2-pentanone	10.0	ND	ND	18.1	NA	20.0	ND	21.5	23,6	20.0	90.3	NA	70.0	127.0	107.6	118.0	70.0	130.0	9.2	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.3	NA	20.0	ND	21.8	21.4	20.0	106.3	NA	77.0	123.0	109.2	106.9	D ************	227.0	2.1	20.0
toluene	5.0	ND	ND	20.1	NA.	20.0	ND	21,1	20.1	20.0	100.4	NA .	83.0	119.0	105.4	100.3	47.0	150.0	5.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	20.6	NA	20.0	ND	21.5	21.4	20.0	102.8	NA	74.0	124.0	107.7	106.8	17.0	183.0	0.8	20.0
1,1,2-trichloroethane	5.0	ND	ND	19.7	NA	20.0	ND	21.1	21.3	20.0	98.4	NA.	72.0	119.0	105.7	106.3	52.0	150.0	0.6	20.0
2-hexanone	10.0	ND	ND	18.5	NA	20.0	ND	23.6	24.2	20.0	92.3	NA	55.0	114.0	118.1	121.1	70.0	130.0	2.5	20.0
1,3-dichloropropane	5.0	NO	DM	20.6	NA	20.0	ND	21.8	21.4	20.0	103.2	NA	73.0	122.0	108.8	107.0	60.0	140.0	1.7	20.0
tetrachloroethene	5.0	ND	ND	20.1	NA	20.0	ND	20.5	19.4	20.0	100.7	NA	82.0	120.0	102.3	97.1	64.0	148.0	5.2	20.0
dibromochloromethane	5.0	ND	ND	19.6	NA	20.0	ND	20.3	20.4	20.0	98.0	NA	72.0	121.0	101.4	102.0	53.0	149.0	0.6	20.0

Votes and Definitions:

IDL = Reporting Detection Limit

ND - Not Detected

3LK = Method Blank

NA = Not Applicable

3LK2 = Second Method Blank

.CS = Laboratory Control Sample

.CS2 = Second Laboratory Control Sample

3MPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

.CL = Lower Control Limit

JCL = Upper Control Limit

RPD = Relative Percent

KEMROSENVIRONMENTAL SERVICES - OVL VOLATION QUALITY CONTROL SUMMARY

2110798W.XLS

Workgroup #: WG49020

8260A

Run Date: 11/7/98

LCS2 FLNM: NA LCS DF:

Method: Matrix:

Water

Instrument ID: HPMS 2

SMPL Num: 10-621-01

SMPL DF:

BLK FLNM: 28K27430 SMPL FLNM: 2BR27434

10 MS DF: 10

Units: ua/L **BLK2 FLNM:** MS FLNM: 2BR27435.D

MSD DF: 10

LCS FLNM: 20C27431.D

NA

MSD FLNM: 2BR27436.D

						ONCENTRA	TION, PPE	3			<u> </u>			PERC	ENT REC	OVERY			PERCE	NT RPO
]				LCS Spike	•	•		MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	FCF	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.0	NA	20.0	ND	21.4	21.4	20.0	100.2	NA	75.0	121.0	107.1	107.2	60.0	140.0	0.1	20.0
chlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	20.9	20.8	20,0	102.9	NA	83.0	120.0	104.5	103.8	37.0	180.0	0.7	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	19.8	NA	20.0	ND	20.7	20.3	20.0	99.1	NA	79.0	118.0	103.3	101.4	60.0	140.0	1.9	20.0
ethylbenzene	5.0	ND	ND	20.6	NA	20.0	ND	21.4	20.4	20.0	103,1	NA	82.0	119.0	107.1	101.8	37.0	162.0	5.1	20.0
m+p-xylene	5.0	ND	ND	40.3	NA	40.0	ND	41.1	40.0	40.0	100.6	NA	81.0	121.0	102.8	100.1	60.0	140.0	2.7	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ИĎ	20.7	20.0	20.0	101.8	NA	81.0	199.0	103.3	99.8	60.0	140.0	3.4	20.0
styrene	5.0	ND	ND	20.5	NA	20.0	ND	21.1	20.8	20.0	102.7	NA	81.0	118.0	105.5	104.0	60.0	140.0	1.4	20.0
bromoform	5.0	ND	ND	17.5	NA	20.0	ND	18.6	19.0	20.0	87.4	NA	68.0	129.0	92.9	95.0	45.0	169.0	2.2	20.0
isopropylbenzene	5.0	ND	ND	20.3	NA	20.0	ND	20.8	19.9	20.0	101.4	NA	81.0	121.0	104.0	99.6	60.0	140.0	4.3	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	19.3	NA	20.0	ND	10.5	5.2	20.0	96.7	NA	61.0	137.0	52.7	26.1	48.0	157.0	67.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	19.2	NA	20.0	ND	21.8	22.2	20.0	96.0	NA	72.0	130.0	109.1	111.0	60.0	140.0	1.7	20.0
rans-1,4-dichloro-2-butana	NTC	NO	ND	NA	NA	20.0	ND	NA	NA.	20.0	NA.	NA	NA	NA	NA	NA	NA	NA.	NA	20.0
propyl-benzene	5.0	ND	ND	21.0	NA	20.0	ND	22.0	21.5	20.0	104.9	NA	69.0	135.0	110.2	107.4	60.0	140.0	2.5	20.0
bromobenzene	5.0	ND	ND	19.8	NA	20.0	ND.	21.1	20.7	20.0	99.2	NA	96.0	118.0	105.5	103.3	60.0	140.0	2.1	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.4	NA	20.0	ND	21.6	21.4	20.0	101.9	NA	83.0	121.0	108.2	106.8	60.0	140.0	1.3	20.0
2-chiarotoluene	5.0	ND	ND	19.5	NA	20.0	ND	21.6	23.1	20.0	97.5	NA	80.0	126.0	107.8	115.4	60.0	140.0	6.8	20.0
4-chlorotoluene	5.0	ND	ND	20.8	NA	20.0	ND	22.1	20.6	20.0	104.2	NA	80.0	125.0	110.3	103.2	60.0	140.0	6.7	20.0
tert-butyl-benzene	5.0	ND	ND	20.9	NA	20.0	ND	22.0	21.4	20.0	104.7	NA	79.0	114.0	110.0	107.1	60.0	140.0	2.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.6	NA	20.0	ND	22.1	21.6	20.0	103.0	NA	84.0	121.0	110.6	108.1	60.0	140.0	2.3	20.0
sec-butyl-benzene	5.0	ND	ND	21.2	NA	20.0	ND	21.6	21.7	20.0	105.9	NA	81.0	122.0	108.0	108.4	60.0	140.0	0.4	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL - Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD - Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49020

Run Date: 11/7/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A

Instrument ID: HPMS_2

SMPL Num: 10-621-01

SMPL DF: 10

Matrix: Water

BLK FLNM: 2BK27430

SMPL FLNM: 2BR27434

MS DF: 10

Units: ug/L

BLK2 FLNM: NA

MS FLNM: 2BR27435.D

MSD DF: 10

LCS FLNM: 2QC27431.D

MSD FLNM: 28R27436.D

						ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCE	NT RPD
					_	LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.5	NA	20.0	ND	21.5	21.1	20.0	102.5	NA	80.0	119.0	107.7	105.3	60.0	140.0	2.3	20.0
1,3-dichlorobenzana	5.0	ND	ND	20,2	NA	20.0	ND	20.9	21.1	20.0	100.8	NA	85.0	119.0	104.6	105.4	60.0	140.0	8.0	20.0
1,4-dichlorobenzene	5.0	מא	NO	19.9	NA	20.0	ND	20.8	20.9	20.0	99.4	NA	82.0	122.0	103.8	104.5	18.0	190.0	0.7	20.0
n-butyl-benzene	5.0	ND	ND	21.9	NA	20.0	ND	22.9	22,5	20.0	109.3	NA	80.0	125.0	114.7	112.3	60.0	140.0	2.1	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.2	NA	20.0	ND	21.3	21.4	20.0	100.9	NA	86.0	119.0	106.4	107.0	19.0	190.0	0.6	20.0
2-dibromo-3-chloropropane	5.0	ND	ND	18.4	NA	20.0	ND	20.7	21.8	20.0	92.1	NA	86.0	134.0	103.6	108.8	60.0	140.0	4.8	20.0
1,2,4-trichiorobenzene	5.0	ND	ND	19.6	NA	20.0	ND	21.0	21.0	20.0	98.2	NA	78.0	122.0	105.0	104.8	60.0	140.0	0.1	20.0
hexachlorobutadiene	5.0	ND	ND	17.8	NA	20.0	ND	17.9	17.9	20.0	88.9	NA	73.0	125.0	89.4	89.6	60.0	140.0	0.3	20.0
napthalene	10.0	ND	ND	19,8	NA	20.0	ND	22.0	22.7	20.0	99.0	NA	74.0	148.0	110.1	113.7	60.0	140.0	3.2	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	19.2	NA	20.0	NO	20.8	21.1	20.0	96.0	NA	74.0	124.0	104.0	105.4	60.0	140.0	1.3	20.0

3LK2 = Second Method Blank

.CS = Laboratory Control Sample

.CS2 = Second Laboratory Control Sample

3MPL = Sample Results

VIS/MSD = Matrix Spike / Matrix Spike Duplicate

.CL = Lower Control Limit

JCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

ANAL WORK GRP: WG49078

EXT DATE: 11/7/98

RUN DATE: 11/9/98 SMPL ID: 11-011-14

METHOD: 8270 BENCH MATRIX: WATER BL

BENCH SHEET: V104P48 BLK FLNM: 14968.D LCS FLNM: 14969.D

SMPL FLNM: 15001.D MS FLNM: 15002.D

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG48815

MSD FLNM: 15003.D

INSTRUMENT: HPMS3
ANALYST: mdc

				CONCE	NTRATION	, ug/L					ſ	PERCEN	IT RECOVE	RY, %					PERCEN	ī			OND RITS
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	rester	LCS	SAMPLE	MS	MSD	MS LCL	MS UCI	DUP RPD	MSD RPD	RPD UCL	SAMPLE	S SCAR	3 S
PYRIDINE	5.0	ND	100	16.8	ND	200	54.9	53.6	NA	16.8	5	150	NA.	27.4	26.8	5	150	ŇA	2	40			TT
N-NITROSODIMETHYLAMINE	5.0	ND	100	36.4	ND	200	81.0	8.08	NA .	36.4	5	150	NA	40.5	45.4	5	150	NA	11	40			
ANILINE	10.0	ND	100	28.9	ND	200	82.6	94.2	NA .	28.9	5	150	NA	41.3	47.1	5	150	NA	13	40			
PHENOL	5.0	ND	100	25.9	ND	200	54.8	60.8	NA .	25,9	5	112	NA .	27,4	30.4	5	112	NA	10	- 40			
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	63.6	ND	200	117.6	131.3	NA	63.6	12	158	NA	58.8	65.6	12	158	NA	11	40			
2-CHLOROPHENOL	5.0	ND	100	57.E	ND	200	112.6	128.5	NA .	57.8	23	134	NA	56.3	64.3	23	134	NA .	13	40			
1,3-DICHLOROSENZENE	5.0	ND	100	43.6	ND	200	95.3	110.0	NA	43.6	5	172	NA	47.7	55.0	5	172	NA.	14	40			
1,4-OICHLOROBENZENE	10.0	ND	100	43.5	NO NO	200	96.3	108.2	NA	43.5	20	124	NA	47.6	54 1	20	124	NA .	13	40			
BENZYL ALCOHOL	5.0	ND	100	49.9	ND	200	117.6	130.B	NA	49.9	5	150	NA NA	58.8	65.4	5	150	NA	11	40			
1,2-DICHLOROBENZENE	5.0	ND	100	45.9	NO.	200	100.9	115.1	NA .	45.9	32	129	NA	50.5	57.5	32	129	NA.	13	40			
2-METHYLPHENOL	5.0	ND	100	54.7	ND	200	115.0	123.9	NA	54.7	5	150	NA	57.5	62.0	5	150	NA	7	40			
BIS(2-CHLOROISOPROPYL)ETH	5.0	ND.	100	74.0	ND .	200	152.6	170.8	NA	74.0	35	166	NA	76.3	85.4	- 36	168	NA	- 11	40			
3- & 4-METHYLPHENOL	5.0	ND	100	49.9	ND	200	106.6	118,1	NA	49.9	5	150	NA	53.4	59.1	5	150	NA.	10	40		J	
N-NITROSO-DI-N-PROPYLAMINE	5.0	ND	100	62.9	NO NO	200	123.7	138.3	NA	62.8	5	230	NA .	61.8	69.1		230	NA .	11	40	⊗ ‡		
HEXACHLOROETHANE	5.0	ND	100	45.2	ND	200	97.2	110.5	NA	45.2	40	113	NA	48.6	55.3	40	113	NA	13	40			1
NITROBENZENE	5.0	ND	100	59.8	ND	200	120.8	136.8	NA	59.8	25	180	NA	60.4	68	35	180	NA :	12	40			
ISOPHORONE	5.0	ND	100	72.6	ND	200	140.5	154.6	NA	72.6	21	196	NA	70.2	77.3	21	196	NA	10	40			
2-NITROPHENOL	5.0	ND.	100	61.3	ND	200	119.0	128.8	NA	61.3	29	182	NA .	59.5	64.3	29	182	NA.		40	30		
2,4-DIMETHYLPHENOL	5.0	ND	100	65.5	ND	200	125.0	141.6	NA	65.5	32	119	NA	62.5	70.8	32	119	NA	12	40		and the second	7.7.
BIS(2-CHLOROETHOXY)METHAN	25.0	ND	100	63,8	ND	200	123.2	138.1	NA	63.8	33	184	NA	61.6	69.1	33	184	NA .	11	40			
BENZOIC ACID	5.0	ND	100	7.9	ND	200	24.7	25,7	NA	7.9	5	150	NA	12.4	12.9	5	150	NA	4	40			
2;4-DICHLOROPHENOL	5.0	ND	100	6Q.1	ND	200	121.0	132.0	NA	60.1	39	135	NA	60.5	66.0	39	135	NA.	9	40			
1,2,4-TRICHLOROBENZENE	5.0	ND	100	46.9	ND	200	100.6	114.8	NA	46.9	44	142	NA	50.3	57.4	44	142	NA	13	40			
NAPHTHALENE .	5.0	NO	100	51.9	NO	200	107.9	123.8	NA	51.9	21	133	NA	54.0	81.9	21	133	NA	14	40		1	
4-CHLOROANILINE	5.0	ND	100	32.7	ND	200	88.2	100,8	NA	32.7	5	150	NA	44.1	50.4	5	150	NA	13	40	~ 7	- T	
HEXACHLOROBUTADIENE	10.0	NO	100	45.8	NO	200	94.4	108.8	NA	45.8	24	116	NA .	47.2	54.4	24	116	NA.	14	40			
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	70.4	ND	200	140.6	149.7	NA	70.4	22	147	NA	70.3	74.8	22	147	NA	6	40			1
Z-METHYLNAPHTHALENE	5.0	ND	100	55.O	ND	200	114.7	126.6	NA.	55.0	5	150	NA	67.3	63.2	5	150	NA	10	40			
HEXACHLOROCYCLOPENTADIE	5.0	ND	100	33.1	ND	200	49.7	52.4	NA NA	33.1	5	150	NA	24.9	26.2	5	150	NA	5	40			
EA 6-TRICHLOROPHENOL	25.0	ND	100	69.8	ND	200	134.0	147.0	NA	69.8	37	144	NA	67,0	73.6	37	144	NA	9	40			
4.5-TRICHLOROPHENOL	5.0	ND	100	72.9	ND	200	146.5	158.1	NA	72.9	5	150	NA	73.3	79.1	5	150	NA	8	40			
CHLORONAPHTHALENE	25.0	ND	100	61.3	ND	200	123.4	138.5	NA	61.3	60	118	and a second control of the second control of	61,7	69.2	60	118	NA O	12	40 ×	***		
2-NITROANILINE	5.0	ND	100	68.3	ND	200	135.5	140.6	NA	66.3	5	150	NA .	67.8	70,3	5	150	NA	4	40	~~~		Two
DIMETHYLPHTHALATE	5.0	ND	100	83.6	NO.	200	181.9	183.2	NA	63.6	5	112	NA .	90.9	92	.	112	NA	1	40	333 B		
ACENAPHTHYLENE	5.0	NO	100	66.9	ND	200	130.7	145.2	NA NA	66.9	33	145	Spirate ja prinde habatana energia strata.	65.3	72.6	33	145	NA	11	40	~~ [^		
a-DINITROTOLUENE	5.0	ND	100	82.2	NO	200	180.2	182.8	NA.	52.2°	50	158	NA	90.1	91.4	50	158	NA		40	***	**	
HITROANILINE	25.0	ND	100	52.6	ND	200	116.8	124.4	NA.	52.6	5	150	NA	58.4	62.2	5	150	NA	**************************************	40	possospic	as person	24000000000
CENAPHTHENE	5.0	≪ND ≪	100	67.4	NO	200	131.8	1423	NA.	87.4	47	145	NA.	65.9	71.1	47	145	NA S	š	40	***		1339 N
2.4-DINITROPHENOL	25.0	ND	100	69.8	ND	200	151.0	128.5	NA	69.8	5	191	NA	75.5	64.2		191	NA	16	40	45554	oralesia.	alassa (sa
Contract Con	0000000000	secondario de la compansión de la compan	*********	รางงานตั้งงานระเ	and the state of the state of the state of	en en en en en en en en en en en en en e	searar timorran	127.8	NA.	55.1	5	132	varience annat obtainear	60.6	63.9		132		5	40	**		deede
LANTROPHENOL	25,0	ND	100	55.1	NO	200	121.1		and a second of the second of	AND ASSESSED.	5	150		69.5	75.6	‱ ⊀ ∞∞∞ 5	150	NA	0,000 ₹ 000 00	40	92319	9 (1 869)	\$ 1 000 1000
)BENZOFURAN	5.0 ********	ND	100	71.8	ND	200	139.0	151.2	NA	71.8	and an income of the	access to the	CONTRACTOR CONTRACTOR	105.4	and and and and	39	139	NA O		40		eds:	dank
4-DINITROTOLUENE	5.0	₩ND ₩	∞100 ⋯	94.0	ND	200	210.8	202.5	NA	94.0	39	139	NA STORE	100.4	1013	100 P 100 000	105	PAR CO	n uras propius ()	N. (44.11.00)	900		4 1000 4000

NOTES & DEFINITIONS :

NA = NOT APPLICABLE

NS = NOT SPIKED

ND = NOT DETECTED

RDL-REPORTING DETECTION LIMIT

WG49078.XLS

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49078

EXT DATE: 11/7/98

RUN DATE: 11/9/98

INSTRUMENT: HPMS3

ANALYST: mdc

METHOD: 8270

BENCH SHEET: V104P48

MATRIX: WATER

BLK FLNM: 14968.D

SMPL ID: 11-011-14 SMPL FLNM: 15001.D

CONCENTRATION UNITS: UG/L

LCS FLNM: 14969.D

MS FLNM: 15002.0

PREP WORK GRP: WG48815

MSD FLNM: 15003.D

		_		CONCE	NTRATION	, ug/L						PERCE	NT RECOV	ERY, %					PERCEN	7		BEYO		_
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	мs	MSD	BLANK	LCS	LCSLCL	LCS UCL	SAMPLE	MS_	MSD	MS LCL	MS UÇL	DUP RPD	MSD RPD	RPO UCL	SAMPLE		S	MSD
DIETHYLPHTHALATE	5.0	ND	100	91.2	ND	200	204.8	197.9	NA	91.2	5	114	NA	102.4	98.9	5	114	NA	3	40	T]	T.1	
FLUORENE	50	ND	100	75.1	ND	200	158.0	163.6	NA	75.3	25	158	NA.	79.0	81,8	25	158	NA	4	40				9696.) (9686.)
4-CHLOROPHENYL-PHENYL ETH	5.0	ND	100	72.7	ND	200	148.1	154.8	NA	72,7	59	121	NA	74.0	77.4	59	121	NA	4	40				
4-NITROANILINE	25.0	ND	100	84.6	ND	200	194,3	185.8	NA	84.6	5	150	NA.	97.2	92.9	5	150	NA		40				
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	80.6	ND	200	176.6	180.7	NA	80.6	5	150	NA	88.3	90.4	5	150	NA	2	40	l			
4.6-DINITRO-2-METHYLPHENOL	25.0	ND	100	100.9	ND	200	235.0	207.3	NA	100.9	5	181	NA	117.5	103.7	5	181	NA .	12	40				
N-NITROSODIPHENYLAMINE **	5.0	ND	100	84.0	ND	200	149.7	143.5	NA	84.0	5	150	NA	74,9	72	5	150	NA	4	40				
4-BROMOPHENYL-PHENYL ETH	5.0	ND	100	69.8	ND	200	152.6	150.8	NA	69.8	53	123	NA	76.3	75.4	53	127	NA.	1	40				
HEXACHLOROBENZENE	5.0	ND	100	84.9	ND	200	187.2	181.4	NA	84.9	5	152	NA	93.6	90.7	5	152	NA	3	40	1 1			
PENTACHLOROPHENOL	25.0	ND	100	75.0	ND	200	230.0	203.5	NA .	75.0	14	176	NA	115.0	101.7	14	176	NA	12	40		* *		
PHENANTHRENE	5.0	ND	100	87.8	ND	200	205.3	194.0	NA	87.8	54	120	NA	102.6	97.0	54	120	NA	6	40				1
ANTHRACENE	5.0	ND	100	90.5	ND	200	198.7	197.4	NA .	90,5	27	133	NA	99.3	98.7	27	133	NA		40				
CARBAZOLE	5.0	ND	100	103.4	ND	200	240.2	228.9	NA	103.4	5	150	NA	120.1	114.5	5	150	NA	5	40				- 1
DI-N-BUTYLPHTHALATE	5.0	ND	100	97.4	ND	200	224.5	212.4	NA .	97.4	***	118	NA	1122	106.2	1000	118	NA	. 6	40				
FLUORANTHENE	5.0	ND	100	98.5	ND	200	226.4	215.4	NA	98.5	26	137	NA	113.2	108	26	137	NA	5	40			1 1	,
PYRENE	9.0	ND	100	100.6	ND	200	229.6	2111	NA	100.6	52	115	NA	114.8	105.6	52	115	NA		40	(4)			
BUTYLBENZYLPHTHALATE	5.0	ND	100	104.3	ND	200	244.3	223.3	NA	104.3	5	152	NA	122.1	112	5	152	NA	9	40			1 1	
BENZO(A)ANTHRACENE	10.0	ND	100	103.6	ND	200	234.0	2183	NA ·	103.6	5	262	NA.	117 Q	109.2	5	262	NA	7	40			dwt	**
3.3'-DICHLOROBENZIDINE	5.0	ND	100	98.0	ND	200	96.4	100.2	NA	98.0	33	143	NA	48.2	50.1	33	143	NA.	4	40				
CHRYSENE	:50	ND	100	99.1	ND	200	229.1	210.8	NA 🌣	99,1	17	168	NA	114.5	105.4	17	168	NA	8	40				
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	100.2	ND	200	238.0	216.2	NA	100.2	8	158	NA NA	119.0	108.1	8	158	NA	10	40				
DI-N-OCTYLPHTHALATE		ND	100	112.1	ND	200	253.6	234.4	NA .	112.1		146	NA .	125.8	117,2		148	NA	8	40				
BENZO(B)FLUORANTHENE	5.0 5.0	ND	100	110.3	ND	200	239.3	217.4	NA	110.3	24	159	NA NA	119.6	108.7	24	159	NA	10	40		1	· [· · · ·]	,
BENZO(K)FLUORANTHENE		ND	100	110.3	NO	200	247.4	234.6	NA S	110.3	, ii	162	NA.	123 7	117,3	31	162	NA		40				
BENZOJAJPYRENE	5.0	********	100	109.1	ND	200	237.4	220.3	NA	109.1	17	163	NA	118.7	110.2	17	163	NA	7	40			7	.,,,
		ND ND		106.1	ND:	200	247.6	227.0	NA .	106.6	5	171	NA.	123.8	113.5	5	171	NA	9	40	***	#		
INDENO[1,2,3-CD]FYRENE	#O	***	100	116.5	ND	200	271.6	248.8	NA	116.5	5	227	NA	135.8	124.4	5	227	NA	9	40	1		T	.,,,
DIBENZIA, HJANTHRACENE	5.0	ND	100	****			253.2	231.0	NA.	108.6	5	219	NA.	126.6	115.5	.	219	NA	•	40			aleest	
BENZOIG,H,IPERYLENII	50	ND	100	108.6	ND	200	4944	**************************************	000 999 0000		: 000000 % 000000) 000 (5) (5) (5) (0)	: :::::::::::::::::::::::::::::::::::::	000000 00000000 00	e e e e e e e e e e e e e e e e e e e	(09001 0 0001000	1990000000000		Security Security Security Security Security Security Security Security Security Security Security Security Se	ulari necestra i ancon		~		
SURROGATES																		<u> </u>			.	<u> </u>	┿	_
2-FLUOROPHENOL		35.3	100	40.4	41.95	100	40.0	45.3	35.3	40.4	21	100	42.0	40.0	45.3	21	100	00000000000	000000000000000	000000000000000000000000000000000000000	2003200	2000-0000		5933C
PHENOL - D5	*****	24.1	100	27.0	28,2	100	27.8	31.1	24.1	27.0	10	94	28.2	27,8	31.1	10	94				80. P			888
NITROBENZENE - D5		27.6	50	31.5	32.4	50	30.9	34.2	55.3	63.0	35	114	64.8	61.8	68.3	35	114		April 10 paga application for the	noscapaciónni	20202	see - 1 20 m		00000
2-FLUOROBIPHENYL	*****	27.5	50	35.3	33.7	- 60	32.3	37.1	55.1	70.6	43	116	87.4	64.5	743	43	116						484	
2.4.6-TRIBROMOPHENOL	-0,00000000000000000000000000000000000	53.4	100	84.7	68.9	100	96.5	93.2	53.4	84,7	10	123	68.9	96.5	93.2	10	123		COLORODO				11	araar
p-YERPHENYL + D14	30.000 ×	47.8	50	48.0	59.5	50	71.3	59.7	95.6	98.0	33	141	118.9	142,6	119.4	33	141					* **	H	

8270_W

WG49078,XLS

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49125 EXT DATE: 11/9/98

METHOD: 8270 BENCH SHEET: V104P98 MATRIX: SOIL BLK FLNM: 12167

LCS FLNM: 12168

CONCENTRATION UNITS : UG/KG

PREP WORK GRP: WG49031

RUN DATE: 11/10/98 SMPL ID : NA

SMPL FLNM: NA MS FLNM : NA

MISD FLNM: NA

INSTRUMENT: HPMS4 ANALYST: MLS

				CONC	ENTRATION	00 / N	(a	Ţ		 1	PERCI	ENT RECC	VERY .			PERCENT		T	BEYON LIMIT	_
ANALYTE	RDL	BLAN	LCS SPIKE ADDED	LCS		MS SPIKE DDED	MS MS	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE		M: SD LC			SEYOND RPD	SAMPLE	ž % :	uks tso
PYRIDINE	165	ND	1670	140	ND ND	1670	NA N		8.4	25	150	NA NA		A 25			40		TU	
NINTROSODIMETHYLAM	×185	ND.	1870	1088		1870	NA N		65.2	25	150	NA		A 25	150	NA	10			
ANILINE	165	ND	1670	238		1670	NA N	A CONTRACTOR OF THE PROPERTY O	14.2	25	150	NA	NA I	A 25			40] L	
PHENOL	165	. ND⊗	1670	1059		1670	NA W	NA	63.4	25	135	NA.	NA 1	A 2:	135		40			
BIS(2-CHLOROETHYL)ET	165	ND	1670	1057	ND	1670	NA N/		63,3	34	135	NA		A 34			40	en arcolo		0000000000
2-CHLOROPHENOL	165	ND	1870	1019	ND	1670	NA N		61,0	31	135	NA .		A 3			(0)			
1,3-DICHLOROBENZENE	165	ND	1670	963		1670	NA NA		57.6	26	135	NA		A 26			10	800 0888		22 S
1.4-DICHLOROBENZENE	185	NO	1870	994		1670	M N		59.5	25	135 135	NA NA		A 25			40 40	86-1999	e per	3001000
BENZYL ALCOHOL	165	ND	1670	1070		1670	NA NA		64.1	25 32	135	NA.		A 852			10		salasala	**
1,2-DICHLOROBENZENE	185	ND:	1870 1670	1030 1085		1670 1670	NA N NA N	Section of the sectio	61,7 64,9	25	135	NA		A 25			7000 (0000000 60	200: 100: 00	oo poogs	occupeos.
2-METHYLPHENOL	165 165	ND ND	1670	1088		1670	NA N	NA S	65.1	26	178	NA.	NA A				io			**
BIS(2-CHLOROISOPROPY 3- & 4-METHYLPHENOL	165	ND	1870	1108	kining a samang panggan ang ang ang	1670	NA N	NA	66.3	25	135	NA	4.0	A 25		The second second second second	(O	~	~~~	· ·
N-NITROSO-DI-N-PROPYL	65	ND	1670	1124		1870	NA N		67.3	27	135	NA.		27		NA	(0	# 1849		
HEXACHLOROETHANE	165	ND	1670	1049		1670	NA N		62.8	25	163	NA		A 25	163	NA 4	60			
NITROBENZENE	165	ND:	1670 ×	1088		1670	NA N	NA.	65.1	36	143	NA	NA 8	A 36	143	NA	10			#
ISOPHORONE	165	ND	1670	1275	Makananana asamananan	1670	NA N	NA	76.4	25	175	NA		A 25			10			
2-NITROPHENOL	165	ND	1670	1088	ND	1670	NA N	NA .	65.2	34	135	NA		A SY			(0			
2,4-DIMETHYLPHENOL	165	ND	1670	1205		1670	NA NA		72.2	35	149	NA		35			60	500 ANOS	and souls	6000000000
BIS(2-CHLOROETHOXY)M	165	ND	1870	1108	ND	1670	NA N		66,3	39	135	NA	NA I		200000000000000000000000000000000000000	Acces (155-15) to a fire	10	80 B	33 4334	<i>77</i> 4
BENZOIC ACID	825	ND	1670	241		1650	NA N		14.4	25	172	NA	************	A 25			60 40	200 25000		×882 3 8881
2,4-DICHLOROPHENOL	165	ND	1670	1097	ec900 0.00 00999	1670	NA N		85,7	36	135	ŅĀ	COUNTY CONTRACTOR	A 34	A 1000 10 To 19		60	80 B.A		20 Dec
1,2,4-TRICHLOROBENZEN	165	ND	1670	1048		1670	NA NA		62.6	34 40	152 135	NA NA	NA N Na N				(i)	***	»:k::b	38 B
NAPHTHALENE	165	NO	1670	1070	C	1870	NA N		64.1 18.7	35	148	NA		A 35			i0	SSS SSS (40	TI.	con proces
4-CHLOROANIUNE	165	ND	1870	311 1094	 	1670 1670	NA N		65.5	25	135	NA.		À 24			40	* * * *		
HEXACHLOROBUTADIEN	165 165	ND ND	1670 1670	1150		1670	NA N		68.9	34	135	NA		A 1 34			60	~ ~~	777	
4-CHLORO-3-METHYLPHE 2-METHYLNAPHTHALENE	165	ND :	1870	1079		1670	NA N		64.6	31	(35	NA	NA I	A 31	135	NA	Ø			
HEXACHLOROCYCLOPEN	165	ND	1870	1008	And recommendation of	1670	NA N		60.4	31	135	NA	NA A	A 31	135		ro			
2.4.6-TRICHLOROPHENO	165	ND	1870	1160	ND	1670	NA N		69.4	29	138	NA	NA I	A 25	138		10			
2.4.5-TRICHLOROPHENO	165	ND	1670	1206		1670	NA N	NA NA	72.2	25	175	NA.		A 25			10			
2-CHLORONAPHTHALEN	165	ND 8	1670	1124	ND	1670	NA N	NA.	67.3	50	135	NA .		A 50			(0			
2-NITROANILINE	825	ND	1670	1011	ND	1670	NA N		60.6	40	135	NA.		A 40			10 2400 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000	200 200	001300	322 S33
DIMETHYLPHTHALATE	165	NO	1670	1188	ND	1670	NA N		71.0	25	175	NA	Section Section 2	A 25		1999/05/2009/44/90/	60		::: :::	S
ACENAPHTHYLENE	165	ND	1670	1141	ND	1670	NA N		68.3	37	135	NA.		A 37			10 	80 888		35 33
2.6-DINITROTOLUENE	165	ND	1670	1255	NO	1670	NA N		75.2	4 1	136	NA.	NA N		135		10 10	*	selse l	S0000
3-NITROANILINE	825	ND	1670	523		1670	NA N		31.3	41	135	NA NA		A 41			The Marie	88 88 A		#
ACENAPHTHENE	165	ND	1870	1149	600 0000 1000 000 000000	1670	NA N		68.8	39	135 161	NA NA		A 25			10	30. 1868		6661,666
2,4-DINITROPHENOL	825	ND	1670	869		1670	NA N		52.0 78.6	25 25	141	NA.		25			(0)	* ****		***
4-NITROPHENOL	825	ND	1670	1312	NO	1670	NA N		72.2	42	135	NA	era contra de contra con	A 42			10 l		wysost:	~~
DIBENZOFURAN	165	ND	1670	1206	ND ND	1670 1670	NA N NA N		75.2	29	149	₩ NA ****		A 29			io	* * &		30
2,4-DINITROTOLUENE	165	ND	1670	1255	NU	1010	O PAR SON IN	Section 14 April 2015	10.6	**************************************	- 17V	100000		are coll access to			فتتعتبت المتعجر	السناس		لنساب

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49125 EXT DATE: 11/9/98

PREP WORK GRP: WG49031

METHOD: 8270 BENCH SHEET: V104P98
MATRIX: SOIL BLK FLNM: 12167
CONCENTRATION UNITS: UG/KG LCS FLNM: 12168

RUN DATE: 11/10/98 SMPL ID: NA SMPL FLNM: NA MS FLNM: NA MSD FLNM: NA INSTRUMENT: HPMS4 ANALYST: MLS

				CONC	ENTRAT	iON , ug i	Kg					PERC	ENT RECO	VERY	, <u>%</u>			PERCE	NT .				OND MTS
ANALYTE	POI :	BLAN	LCS SPIKE ADDED	LCS	CAMOI	MS SPIKE E ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MS	% RPD	RPD LIMIT	SEYOND RPD	SAMPLE	<u> </u>	ું જુ દ
DIETHYLPHTHALATE	165	ND	1670	1204	ND	1670	NA NA	NA.	NA NA	72.1	27	135	NA NA	NA.	NA NA	27	135	NA NA	40	<u> </u>	<i>~</i>		 _
FLUORENE	185	ND:	**************************************	1150	₩ ND	1670	NA.	NA.	NA.	68.9	l ŝė	(49)	NA	NA:	NA.	38	140	NA.	¥0∷	*****	288	sala	edeeds
4-CHLOROPHENYL-PHEN	165	ND	1670	1125	ND	**************************************	NA	NA	NA NA	67.4	41	**************************************	NA	NA	NA	41	142	NA	40	000000000000000000000000000000000000000	3000	35343	7000000000
4-NITROANILINE	825	ND	1670	523	ND	1670	NA.	NA.	NA	313	30	153	× NA	NA:	NA	20	153	NA.	45		388	88 1 0	edente
1.2-DIPHENYLHYDRAZINE	165	ND	1670	953	ND	1670	NA	NA	NA NA	57.1	25	150	NA	NA	NA	25	150	NA	40	latioacenee keleba	: A3330	SS SE	eschoose had
4.6-DINITRO-2-METHYLPH	825	ND	∞1670 ⊗	1307	ND.	****1870	NA.	NA	NA.	78.3	34	135	*** NA ****	NA:	NA:	34	135	NA:	40	*******	- XX	880 S	ad as le
N-NITROSODIPHENYLAMI	165	ND	1670	990	ND	1670	NA	NA	NA.	59.3	25	135	NA	NA	NA	25	135	NA	40	MANAGE CONTROL	1		
4-BROMOPHENYL-PHENY	185	ND	1870	1021	ND	1670	NA.	NA	NA .	61.1	43	137	NA.	NA .	NA	43	137	NA.	40				
HEXACHLOROBENZENE	165	ND	1670	1163	ND	1670	NA	NA	NA	69.6	36	143	NA.	NA	NA	36	143	NA	40	000000			
PENTACHLOROPHENCL	625	ND	1870	1108	ND	1670	NA.	NA.	NA.	86.4	38	146	NA.	NA.	NA.	38	146	NA.	40			₩	
PHENANTHRENE	165	ND	1670	1191	ND	1670	NA	NA	NA	71.3	44	135	NA	NA	NA	44	135	NA	40		 ,		7.7
ANTHRACENE	165	ND	1670	1213	ND	1670	NA	NA.	NA	72.7	35	175	NA.	NA:	NA.	35	175	NA .	40				
CARBAZOLE	165	ND	1670	918	ND	1670	NA	NA	NA	55.0	25	150	NA	NA	NA	25	150	NA	40		1	" '	
DHN-BUTYUPHTHALATE	165	ND	1670	1224	ND:	1670	NA.	NA.	NA	73.3	25	136	NA	NA	NA	25	136	NA.	40				
FLUORANTHENE	165	ND	1670	1230	ND	1670	NA	NA	NA	73.6	37	135	NA	NA	NA	37	135	NA	40			[
PYRENE	185	ND	1670	1301	ND	1670	NA.	NA	NA :	77.9	37	146	NA	NA	NA I	37	148	NA	40				
BUTYLBENZYLPHTHALAT	165	ND	1670	1307	ND	1670	NA	NA	NA	78.3	25	135	NA	NA	NA	25	135	NA.	40				
BENZO(A)ANTHRACENE	330	ND	1870	1244	ND	1670	NA	NA	NA.	74.5	A \$	143	NA	NA .	NA.		143	NA	40				
3,3'-DICHLOROBENZIDINE	165	ND	1670	20	ND	1670	NA	NA	NA	1.2	25	175	NA	NA	NA	25	175	NA	40				يا المالية
CHRYSENE	165	ND	1670	1211	ND	1870	NA.	NA	NA.	72.5	45	143	NA .	NA.	NA	45	143	NA	40				
BIS(2-ETHYLHEXYL)PHTH	165	ND	1670	1318	ND	1670	NA	NA	NA	78.9	25	139	NA	NA	NA	25	139	NA	40		ll.		
DHN-OCTYLPHTHALATE	165	ND	1670	1474	ND	1670	NA.	NA.	NA	88.3	28	137	NA	NA	NA	28	137	NA	40				
BENZO(B)FLUORANTHEN	165	ND	1670	1414	ND	1670	NA	NA	NA	84,7	27	135	NA.	NA	NA I	27	135	NA	40				
BENZOKIFLUORANTHEN	185	ND	1670	1475	ND	1670	NA	NA.	NA	88.3	25	150	NA	NA :	NA:	25	150	NA	40			80 B	
BENZOJAJPYRENE	165	ND	167D	1399	ND	1670	NA	NA	NA	83.8	31	135	NA	NA	NA	31	135	NA	40			223	and and a
INDENO[1,2,3-CDJPYREN	185	ND	1870	1358	ND	1670	NA.	. NA	NA.	81.2	25	170	NA	NA	NA.	25	170	NA.	40			***	
DIBENZIA HJANTHRACEN	165	ND	1670	1445	ND	1670	NA.	NA	NA	86.5	40	135	NA.	NA	NA	40	135	NA	40	0.0000000000000	000000	scede.	
BENZO(G,H,IJPERYLENE	165	ND	1670	1371	ND	1670	NA	NA	NA.	82.1	25	159	NA.	NA.	NA	25	159	NA	40	30.00			
SURROGATES									•		[_[
2-FLUOROPHENOL		58.2	100	65.7	NA	100	NA	NA	58.2	65.7	25	121	1			25	121	1			П	Т	
PHENOL - DS	2888888	64.8	1DO	67.2	···NA	100	NA.	ŇÀ	64.8	87.2	24	113				24	113					** *	
NITROBENZENE - D5	augganga	32.1	50	35.0	NA	50	NA	NA	64.1	70.0	23	120	10000000000000000000000000000000000000	osyvesteri	varaneeseative.	23	120				1 1		
2-FLUOROBIPHENYL	2000000	36 4	∞ 5 0 ∞	37.9	₩ NA	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NA.		72 9	75.8	30	115				30	115					* 1 8	
2.4.6-TRIBROMOPHENOL	(1966) -	72.8	100	77.1	NA	100	NA	NA	72.8	77.1	19	122		M/00000000	ennenneksiöör	19	122		e e si concentration	e po mentro de mentro de la filicia.		1	
D-TERPHENYL DIA	 10000000000000000000000000000000000	44.9	50	46.6	₩ NA	50	···NA	NA	89.8	93/1	18	137	· 600.000.000			18	137						

NOTES & DEFINITIONS :

NA = NOT APPLICABLE

ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED L= below QC limit H=above QC limit * = RPD above ilmit

INSTRUMENT: HP 9

SAMPLE ID: 11-098-01

EXT'N DATE: 11/6/98

ANALYST : ECL

BLK FLNM: 1313 LCS FLNM: 1314 SMPL FLNM: 1316

EXT'N BENCH SHT : V104P66

RUN DATE: 11/11/98

MS FLNM: 1317

EXT'N WORK GRP: WG48947 ANAL WORK GRP: WG49204

MSD FI N

MSD FLNM: 1318

		CONCENT	RATION, ug/kg	% RECO	OVERY	PERCENT	
						MS/MSD RPD	
COMPOUND	RDL		Sample MS MSD	LCS LC Blank LCS LCL UC	S L <u>Sample MS MSD</u>	MS MS LCL UCL RPD Advisory Lin	Blank LCS Sample MS
	Tatal Services			akkkanan bank			
ALPHA-BHC GAMMA-BHC	1.7	ND 13.8	ND 12.2 12.3 ND 12.7 12.9	NA 82.5 37 13 NA 87.8 32 12	1.16つかたたいたいたいたいかいかいかいかんだい	51 145 1.4 0-43 54 134 1.9 0-18	
BETA-BHC HEPTACHLOR	1.7 	ND 14.5	ND 14.0 14.1 ND 16.5 16.8	NA 86.8 17 14 NA 92,0 34 11	allet er et et en 1995 en en 1995 et l	51 129 0.7 0-28 40 139 1.3 0-37	
DELTA-BHC ALDRIN	1.7 1.7.	ND 15.5	ND 14.8 14.9 ND 50.6 58.2	NA 92.8 19 140 NA 89.0 42 123	ido e con contrata de proportición della	56 138 0.5 0-78 26 143 10.3 0-38	Section 4
HEPTACHLOR EPOXIDE GAMMA-CHLOROANE	1.7	ND 15.0 ND NA	ND 17.6 17.9 ND NA NA	NA 90.1 37 142 NA NA 45 116		51 135 1.8 0-40 45 115 NA 0-40	
ALPHA-CHLORDANE ENDOSULFAN: (1.7 1.7	ND NA	ND NA NA ND 135 136	NA NA 54 118 NA 74.0 45 153	NA 80.8 82.5	45 115 NA 0-17 37 123 2 1 0-22	
4,4-DDE DIELORIN	3.3 3.3 3.3	ND 15.3	ND 56.3 61.5 ND 948 971	NA 91.5 30 145 NA 97.5 36 146	NA 5878 8 5812.4	64 152 8.9 0-23 23 171 2.3 0-20 56 154 7.9 0-28	
ENDRIN 4,4-DDD ENDOSULFAN II	3.3 3.3	ND 15.1 ND 16.2 ND 12.8	ND 135 146 ND 39.3 16.6 ND 1388 1424	NA 90.2 30 147 NA 98.7 21 141 NA 76.8 D 202	NA 235,2 99,4	56 179 81.2 0-30 21 117 2.6 0-18	н н Н Н н
A.4-ODT ENDRIN ALDEHYDE	3.3 3.3	ND 15.9	ND 2690 0.D ND 123 131	NA 95.4 25 160 NA 68.8 NA NA		42 (68 200.0 0-22 21 115 5.9 0-40	Н н
ENDOSULPAM BULPATE METHOXYCHLOR	3.3. 17	ND 14.4	ND 0.00 0.00 ND 218 232	NA 68.5 26 144 NA 86.3 NA NA		31 117 #DIV/01 0-30 26 196 5.9 0-19	1930 годи н н
ENDRIN KETONE Tech-CHLORDANE	3.3 33	ND 14,2	ND 182 198 ND NA NA	NA 64.9 NA NA NA NA 45 119	NA 109,2 118	NA NA 8.0 45 115 NA 0-40	
TOXAPHENE	33	ND NA	ND NA NA	NA NA 41 126		40 t25 NA 0-40	
SURROGATES							
2,45,6 TETRACHLORO M-XYLENE DECACHLOROBIPHENYL		15.1 13.7 18.4 18.7	14.3 12.8 12.6 35.6 34.8 47.5	75.7 68.6 13 154 92.0 83.7 25 140		13 154 25 140	нин

NOTES & DEFINITIONS :

LCS, MS & MSD apiked at 16.7 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/kg

MS=MATRIX SPIKE

NA - NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

NO - NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMPON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 8080 SOILS , REAR

INSTRUMENT: HP 9

SAMPLE ID: 11-098-01

EXT'N DATE: 11/6/98

ANALYST : ECL

SMPL FLNM: 1316

EXT'N BENCH SHT: V104P66

RUN DATE: 11/11/98 LCS FLNM: 1314

BLK FLNM: 1313

MS FLNM: 1317

EXT'N WORK GRP: WG48947 ANAL WORK GRP: WG49204

MSD FLNM: 1318

		CONCEN	TRATION, ug/kg			% RECO	VERY			PERCENT	
COMPOUND	ROL	Blank. LCS	Sample MS M	SD Blan	k LCS	LCS LCS		MSD	MS MS	RPD S MS/MS L D RPD Advisory Limit	Blank LCS Sample MS
	PERM	DISTANCE.					lina uma				
ALPHA-BHC GANINA-BHC	1.7 1.7	ND 15.7	NO 14.8 1	.3 NA	94.0 103.2	37 134 32 127	NA 88.4 NA 93.5	85.9	51 14	5 2.9 0-43	
BETA-BHC HEFTACHLOR DELTA-BHC	1.7 1.7 1.7	ND 15.8 ND 16.0 ND 18.2	ND 15.4 14 ND 15.4 15 ND 19.9 18	,0 , , , NA	94.4 95.8	17 147 34 111	NA 92.1	83.9 89.9	51 129 40 138	2,5 0.37	
ALDRIN HEPTACHLOR EPOXIDE	1.7 1.7	ND 17.2 ND 17.5	ND 19.9 19.9 19.9 19.7 19.7 19.7 19.7 19.7	j NA	108.8 103.1 104.8	19 140 42 122 37 142	NA 119.0 NA 94.1 NA 3386.	90.6	56 138 26 143 51 135	3.8 0-38	н н
GAMMUA CHLOREIANE ALPHA-CHLORDIANE ENDOSULFAN: 1	1.7 1.7	ND NA ND NA	ND NA N ND NA N ND 60 0	NA NA	NA NA 64,0	45 (19 54 119 45 153	NA NA NA NA NA O.O.	NA NA 0.0	45 115 45 115 37 123	NA 0-17	
4,4-DDE DIELDRIN	3.3 3.3 3.3	ND 18.9 ND 19.0	ND 188 16 ND 1442 17	5 NA	113.2 114.0	30 145 36 146	NA 1127.	9 1169.0 0 10675.1	64 152 23 171	3.6 0-23 21.1 0-20	н н Н (
ENDRIN 4.4-000 ENDOSULFAN II	3.3 3.3	ND 16.9 ND 15.0	ND 449 40 ND 2527 25 ND 2141 22	t NA	101.5 110.9 89.6	30 147 31 141 D 202	NA 2690. NA 16133. NA 12822.	2 : 16894; 1	56 154 56 179 21 117	มี เกราร์บกรรยบบันได้การย	н н Н Н н
4.400T Endrin Aldehyde	3,3 3,3 3,3	NO 13.7	NO 3804 38 ND 539 55	4 NA	115.7 82.3	25 160 NA NA	NA 19765 NA 3228.0	3 3314.6	42 168 21 115	2.6 0-40	н н н н
ENDOSYLPAN SYLPATE METHOXYCHLOR ENDRIN KETONE	17 23	ND 17.8 ND 17.8 ND 16.8	ND 21.9 21 ND 2931 30 ND 3061 31	3 NA	77,4 106.6 100.4	25 144 NA NA NA NA	NA 131.3 NA 17549. NA 18450	5 18044.8	\$1 117 26 196 NA NA	2.8 0-19 0.7	н н
Tech-CHLORDANE TOXAPHENE	33 33	ND NA	ND NA N	a kanasi	NA NA	45 119 41 126	NA NA	NA NA	45 115 40 125	4 - 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
SURROGATES											
2.4.5,6-YETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		16.4 15.7 23.4 21.4	17.8 15.8 15 38.2 41.5 41		,,,,,,,,,,	13 (54 25 140	89:1 78.1 190.8 207.3	78.2 208.3	13 154 25 140		н н н

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 16.7 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/kg

MS=MATRIX SPIKE

NA . NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT ND - NOT DETECTED

RDL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARKETTA, OH
QUALITY CONTROL SUMMARY / SOET WATERS , FRONT

INSTRUMENT: HP9

SAMPLE ID: 11-058-01

EXT'N DATE: 11/5/98

ANALYST: ECL

SMPL FLNM: 1328

BLK FLNM: 1325

LCS FLNM: 1326

EXT'N BENCH SHT : V104P60

RUN DATE: 11/11/98

MS FLNM: 1329

EXT'N WORK GRP: WG48885 ANAL WORK GRP: WG49203

MSD FLNM: 1330

			CONCE	NTRATI	ON, u	y/L			% F	REÇO	VERY					PEFICENT		
COMPOUND	ADL	Blank	LCS	Sampl	e MS	MSD	Blank	LCS		LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD APD	RPD Adivsory Limits	Slank Sample NS
EULISIA PARTE PROPERTIE	M H					攤攤	Perandu				KAM	ĦŪ		la M	W			
ALPHA-BHC BAMMA-BHG	0.05 0.05	ND :ND::	0.388 0.415	ND ND	0.646	0.779 0.856	NA NA	77.6 83.0	37 32	134 127	NA NA	64.6 72.8	77.9 65.6	51 54	145 134	18.7 16.8	0-43 0-18	
BETA-BHC HERTACHLOR	0.05	ND NO	0.396		0.862 0.724		NA SENASE	92.8 79.2	17 34	147 [[4]	NA NA S	86.2 72.4	100.9 85.9	51 40	129 139	15.7 (193)	0-28 0-37	
DELTA-BHC ALDRIN	0.05 0.05 0.05	ND NEI	0.485 0.366	(∙NO	0.916 0.716	0.861	NA NA	97.0 73.2	19 42	140 122	NA NA	91.6 -71:6	103.2 86. (1	136 143	11.9 ∴18.€	0-78 :::0-88 :::	
HEPTACHLOR EPOXIDE GAMMA-CHLORDANE ALPHA-CHLORDANE	0.05	ND NO ND	0.448 NA :		0.848 NA NA	0.980 :: NA:: NA	NA NA NA	89.6 NA :	37 45 54	142 119 119	NA NA NA	84.6 NA NA	98.0 NA	51 45 45	135 115 115	14.7 14.8 NA	0-40 0-40 0-17	
ENDOSULFAN (4,4-DDE	0.05 0.10	NO.	0.460	ND.	0712	0.988	NA NA	74.8 92.0	#5 30	153 145	NA NA	71:2 87.1	98.8	37 64	I	12.9 12.8	0-22 0-23	
DIELDRIN ENDRIN	0.10. 0.10	NO ND	0.495 0.461		0.978 0.950	1,12 1,10	NA NA	99.0 92.2	36 30	148 147	NA NA	97.8 95.0	111.6 110.2		(7) 154	13.2 14.8	0-20 0-28	
A A-EEED Endosulfan II	0.10 0.10	ND ND	0.51 6 0.421	I ND	0.993 0.787	0.903	NA NA	1,03.2 84.2	.81 D	141 202	NA NA	.99:3 78.7	90.3	21	179 117	13.6 13.7	0-80 0-18	
44-00T Endrin Aldehyde	0.10	ND ND	0.497 0.369		0,850 0.662	1	NA	99:4 73.8	25 NA	160 NA	NA NA	95 0 66.2	77.8		168 115	15.0 16.1	0-22 0-40	
ENEIGSLEFAN SOLFATE METHOXYCHLOR	0.50	ND ND	0.462	I ND	0.720 0.850	0.955	NA NA	92.4	26 NA	NA	NA NA	72.0 85.0	82.9 95.5	26	117 196	11.6	0-30 0-19	
ENDRIM KETONE Tech-CHLORDANE TOXAPHENE	0.10. 1.00 1.00	ND ND	NA NA	ND	O BSG NA NA	Q.929 NA	NA NA	91.8 NA NA	45 41	NA 119 126	NA NA NA	63-6 NA NA	NA NA		NA 115 125	10.5 N/A	0-40 19-40	
SURROGATES				- : • •						_								
ZAKA-TETHACHŁORO M-XYLENE DECACHLOROBIPHENYL		9.94	10.9 I		8:59 13.2	12.4 13.2	40.3 49.7	54.4 57.6	13 25	15 1 140	39.2 45.7	43.5 65.9	62.1 66.0	18 25	 154 140			

NOTES & DEFINITIONS:

LCS, MS & MSD epiked at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/L

MS=MATRIX SPIKE

NA = NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL - DILUTED OUT

NO - NOT DETECTED

RDL-REPORTING DETECTION LIMIT

KEMPON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 8061 WATERS , REAR

INSTRUMENT : HP9

SAMPLE ID: 11-058-01

EXT'N DATE: 11/5/98

ANALYST: ECL RUN DATE: 11/11/98 **BLK FLNM: 1325**

SMPL FLNM: 1328

EXT'N BENCH SHT: V104P60

LCS FLNM: 1326

MS FLNM: 1329

EXT'N WORK GRP: WG48885 ANAL WORK GRP: WG49203

MSD FLNM: 1330

		<u> </u>	CONCE	NTRATI	ON, uc	/L			% П	ECOV	ERY				!	PERCENT		
COMPOUND	RDL	Blank	ıcs	.Sampl	e MS	MSD	Blank	LCS	LCS LCL		Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limists	Blank LCS Sample MS
	Boll br	mina			THE R		MAR	iiiidaa		髍	NIA.	appin.	Will.		NA NA	GHT II		
ALPHA-BHC	0.05	ND	0.440	I ND	0.719	0.868	NA.	88.0	37	134	NA	71.9	86.8	51	145	18.8	0-43	
CAMMA EHC	0.05	NO:	0.487	i Nb	0.833	.o.d73	::::NA::	97.4	32:	127	NA:	83.5	97:3	: 54	334	15.5		
BEYA-8HC	0.05	ND	0.490	I ND	0.952	1.07	NA	98.0	17	147	NA	95.2	107.2	51	129	11.9	0-28	
HEFTACHLOR	0.03	NO	0.412	UND:	0.753	0.885	, NA	82 #	.84	100	NA:	75.3	68.5		189	ijan.	9:37	
DELTA-BHC	0.05	ND	0.588	I ND	1.12	1.26	, NA	117.6	19	140	NA.	112.1	126.3		138	11.9	0-78	1500000000
ALDRIN	0.06	`ŅĎ∵	0.410	I ND	0.818	.;0,962	::::NA:::	∷. 83.2	42	. 122	: NA:	81,8	96.2		143	16.2	0-38	
HEPTACHLOR EPOXIDE	0.05	NO		I ND	0.983	17.555.55	NA.	105.4	37	142	. NA	98.3	109.2		135	10.5	0-40	0000000
GAMMA-CHUGREIANE	0.05	∴NO∷):·ND:	.∵ . W.	⊹NA:	:- 18A-:-	: NA:	45	.179	· NA	: NA::	· · · · · · ·) 16	DONA DO	0.040101	14444444
ALPHA-CHLORDANE	0.05	ND		I ND	NA	NA	NA 	NA	54	119	NA	NA 	NA		115	NA	0-17 0-22	
ENDOSULFAN:	0.05	NO.	(d.421)		0.609	0.898	::::NA:::	84.2	45	153	NA:	60.9	89:8		123	10,400	0-23	
4,4-00E 1555555555515111111111111111111111	0.10	ΣD	0.566	I NO	1.08	1.20	NA	113.2 	30	145	NA	108.0	119.6	II	152	10.2	0-23 0-20	
DIECORIN	0.10	ND	0.581	````	Sign.	1,24	NA.	105.2	36	146	NA.	107.7	123.8 122.3		154	12.7	0-28	
ENDRIN	0.10	ND	0.536	I ND	1.08	1.22	NA NA	107.2	30 31	147	NA NA	111.0	123:3	58	٠	10.5	0-30	
6/4- 200	0.10	ND ∴NÖ∷	0.592	(CIND)	0.867		NA.	96.6	D.	202	NA	86.7	98.5	1	117	12.7	0-18	
ENDOSULFAN II 4.4-00T	0.10	ND:	0.403		1.16	1.31	: NA:	123.8	25	031	NA :	116.1	(30.8		168	11.9	0-22	
ENORIN ALDEHYDE	0.10	ND	0.446	I ND	0.799		NA	89.2	NA	NA.	NA.	79.9	91.7	, , , , , , , , , , , , , , , , , , ,	115	13.8	0-40)
ENDOSULFAN SULFATE	D.10	NO	0.449		0.802		NA:	89.8	26	144	NA .	80.2	91:0	31	117	12:6	∵636:::	
METHOXYCHLOR	0.10	ND		I ND	1.10	1.24	NA.	117	NA	NA	NA.	110.4	124.3	26	196	11.8	0-19	
ENDRIN KETONE	0.0	ND	0.544		0.955	1.06	NA.	100	NA:	NA.	NA.	95.5	106:1	NA.	ΝÀ	10.5		
Tech-CHLORDANE	1.0	ND	NA.	I ND	NA.	NA	NA.	NA	45	119	NA.	NA	NA	45	115	NA	0-40	
TOXAPHENE	· 1 D	NO	: KIA	(ND	NA:	::NA	· NA	ŅĀ:	(1)	126	: NA	ŅA	NA:	· 40.	125	NA:	0.40	
SURROGATES															ᅴ			
000000000000000000000000000000000000000	333333			A A KA		(1223) (1223)				154	42.7	46.9	55.5	13	154	1888888		
ZALKIGITETHACHLOROGIA XYLENE DECACHLOROBIPHENYL	130000	9.60 13.4		1.855 11.5	9.39	(1331) 1 7.4	48.Q	.:58.2 79.3	25	140	57.7	85.2	87.1		140	1,7,7,7,7,7,7,7,7	yraratatatatatat	

NOTES & DEFINITIONS:

LCS, MS & MSD apiked at 0.5 ug/L

LCS-LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/L

MS=MATRIX SPIKE

NA = NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL - DILUTED OUT

ND . NOT DETECTED

ROL=REPORTING DETECTION LIMIT



KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

INSTRUMENT: HP10

SMPL ID: 11-076-01

EXT'N DATE: 11/5/98

ANALYST: CDB

EXT'N BENCH SHT: V104P61

RUN DATE: 11/9/98

BLK FLNM: 002F0101 LCS FLNM: 003F0101

SMPL FLNM: 004F0101 MS FLNM: 005F0101

EXT'N WORK GRP: WG48886

ANAL WORK GRP: WG49842

LCS Dup FLNM : NA

MSD FLNM: 006F0101

<u> </u>			CONCEN	TRATION, 1	ig/L	-			% REC	OVER	Y						PERCENT					
COMPOUND	RDL	Blank	LCS_	Sample	MS	MSD	Blank	LCS	LCS LC	CL S	ample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Umits	Blank	ಚ	Sample	κs	MSD
AROCLOR 1016 AROCLOR 1221	0.5 0.5	ND ND	ND NA	ND ND	4.54 NA	4.09 NA	NA NA	NA NA	48 1; NA N	25	NA NA	90.7 NA	81.8 NA	48 NA	125 NA	10.4 NA	NA NA					3.7.0
AROCLOR 1232 AROCLOR 1242 AROCLOR 1248	0.5 0.5 0.5	ND ND ND	NA NA NA	ND ND ND	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA N NA N		NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA	NA NA NA	NA NA NA					
AROCLOR 1254 AROCLOR 1260	1.0 1.0	ND NO	NA ND	ND ND	NA 4.63	NA 4.98	NA NA	NA NA	NA N 59 12	A	NA NA	NA 92.5	NA 100	NA 59	NA 122	NA 7.5	0-40 NA					
SURROGATES																						
2.4.5.6-TETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		0.103 0.113	0.113 0.122	0.134 0.141	0.282 0.299	0,193 0,360	51.5 56.5	56.5 61.0	13 15 25 14		67.0 70.5	63.0 74.8	46.3 90.0	13 25	154 140							

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg SURROGATES spiked at .0200 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / PCB SOILS, REAR

INSTRUMENT: HP10

SMPL ID: 11-098-01

EXT'N DATE: 11/6/96

ANALYST: CDB

SMPL FLNM: 058R0101

EXT'N BENCH SHT: V104P67

RUN DATE: 11/9/98

MS FLNM: 059R0101

EXT'N WORK GRP: WG48948

ANAL WORK GRP: WG49025

MSD FLNM: 060R0101

			CONCENT	RATION, u	ig/Kg				% RECO	VERY						PERCENT					_
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank Ski grog kopon	LCS	LCS LCS LCL UCI		MS The distribution	MSD	MS LCL	MS UCL	RPO	RPD Advisory Limits	Blank	တ	Sample	MS	MSD
AROCLOR 1016	17.0	ND	95.6	33.2	112	124	NA	115	29 131	NA	95.0	109	29	131	9.6	NA		338.00		*****	::::::::::::::::::::::::::::::::::::::
AROCLOR 1221 AROCLOR 1232	17.0 17.0	NO ND	NA NA	ND ND	NA NA	NA NA	NA NA	NA NA	NA NA NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		0000000	10000000000000000000000000000000000000	00000000	esercen
AROCLOR 1242 AROCLOR 1248	17.0 17.0	ND ND	NA S	ND ND	NA NA	NA S	NA NA	NA NA	NA NA NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA					
AROCLOR 1254	33.0	ND	NA.	ND)va	Ŵ	nã.	NA	NA NA	NA.	NA.	NA.	N.	NA	NA .	0-40				н	н
AROCLOR 1260	33.0	ND	98.7	95606	111650	105009	NA	119	29 131	NA.	19261	11289	29	131	6.1	NA .					
SURROGATES													-				 		1	1	
2.4.5,6-TETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		6.62 8.57	7.15 8.71	5.09 12.4	6.14 13.4	6.03 12.6	99,3 128	107 131	29 133 30 173		92.0 201	90.4 169	29 30	133 173					Н	н	н

BLK FLNM: 055R0101

LCS FLNM: 056R0101

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 83.3 ug/kg SURROGATES spiked at 6.67 up/kg

MS=MATRIX SPIKE

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

MSD=MATRIX SPIKE DUPLICATE

LCS=LABORATORY CONTROL SAMPLE

RDL=REPORTING DETECTION LIMIT

ENVIRONM AL SER	VIC	ES											Ž	o											● 3T0Q2	
CHAIN-OF-CUS				ORD									76	<u>-</u>											Page of	
Project Contact: Y Y R Turn Around Requirements:	iR.I	0/	<u> </u>			-							711 07	-				T								
Project No.: Project Na.: 4119-007 Pod C. Sampler (print): LLIN KI MS. 6 16 Katheri (V. Br. 1/0 M.	me:	t	Signa Signa	ature:	Keni	ozek	neo	NUMBER OF SAMPLES			J.	-/PCP	30,20												4257-6444	•
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Relinquished by: (Signature) 'Homogenize all composite samples price	or to an	alysis	Date	Tim	(Signature)		_ <u> </u>	Socite - Lai	3 /2	ellow -	11/3	98	Tir /or k-Fle		l	narks:	S	ear	led	·	یک	am	21	/ = 5	_	
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1	Work Order	148110	AR Client	Ver-m	D Hof Sa	imples_S	Due Date_	11/19	Page_/	
Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
<i>U</i> 1,03,04	3170	[VI	Pik 11/4/9860830	wolk-11	SIMB	15/1	OM MONTO (ACTION)	Achiva.	1319	Artivi
-05 02,03,04	PEST/CC/S	sul Ext	11/05/18 () 1112	WALFEN	SAB CAB	DA	140168 Octo 571525	Aichiva Dumpatu	KILL	Pichos Wisposl
9-4,6-8 -cs	TSS PLSTIPPS	Anal Ext	May 68 1541.	Madkin Walkin	Wet	Big	17 12 12 12 12 12 12 12 12 12 12 12 12 12	Archive Achiva	131g	Archive Archive
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KEMRON Environmental Services 109 Services 109 Marietta, Ohio 45750

Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road Columbia, MD 21045-1934

Login #: L9811111 Report Date: 11/20/98 Work ID: PEDRICKTOWN DISPOSAL

Date Received: 11/06/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9811111-01	WEIR 110598/COMP	L9811111-02	INLET 110598/GRAB/TOP
L9811111-03	INLET 110598/GRAB/BOTTOM	L9811111-04	MIX 110598
L9811111-05	WEIR 110498	L9811111-06	WEIR 110398

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Dennis S. Tepe



Login #L9811111 November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811111-01 Client Sample ID: WEIR 110598/COMP Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water Collected: 11/05/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	27		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811111-01

Client Sample ID: WEIR 110598/COMP

Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water

Date Collected: 11/05/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: 11/09/98
Analysis Date: 11/10/98 Time: 12:48

Instrument: HP10

Analyst: CDB Lab File ID: 058R0101

Method: 8082/3550 Run ID: R56138

Batch: WG49060

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1	-
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	41.4 37.5	(13 - 154%) (25 - 140%)			

A SHORT OF THE PROPERTY.

TCLP Extract Date: N/A

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811111-01

Client Sample ID: WEIR 110598/COMP Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water

Date Collected: 11/05/98

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

Dil. Type: N/A COC Info: N/A

Instrument: HP9

Method: 8081A\3510C Run ID: R56302

Extract Date: 11/09/98
Analysis Date: 11/10/98 Time:

Analyst: ECL Lab File ID: 1283

Batch : WG49091

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
319-84-6	alpha-BHC	ug/L		ND	0.05	1	
319-85-7	beta-BHC	ug/L		ND	0.05	1	
319-86-8	delta-BHC	ug/L		ND	0.05	1	
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	1	
76-44-8	Heptachlor	ug/L		ND	0.05	1	
309-00-2	Aldrin	ug/L		ND	0.05	ï	
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	ī	
959-98-8	Endosulfan I	ug/L		ND	0.05	ī	
60-57-1	Dieldrin	ug/L		ND	0.10	ī	
72-55-9	4,4'-DDE	ug/L		ND	0.10	ī	
72-20-8	Endrin	ug/L		ND	0.10	ī	
33213-65-9	Endosulfan II	ug/L		ND	0.10	ī	
72-54-8	A AL-DDD	ug/1		ND	0.10	1	
1031-07-8	4,4'-DDD Endosulfan sulfate	ug/L		ND	0.10	ī	
	A 41 DDM	ug/L		ND	0.10	ī	
50-29-3	4,4'-DDT	ug/L		ND	0.50	i	
72-43-5	Methoxychlor	ug/L		ND	0.10	า๊	
53494-70-5	Endrin ketone	ug/L		ND	0.10	Ť	
7421-93-4	Endrin_aldehyde	ug/L		ND	0.05	†	
5103-71-9	alpha Chlordane	ug/L			0.05	†	
5103-74-2	gamma Chlordane	ug/L		ND		†	
8001-35-2	Toxaphene	ug/L		ND	1.0		
arm n	OGRANIC To Descent Descent						
SURR	OGATES- In Percent Recovery:	37.		13 - 154%)			
	2,4,5,6-Tetrachloro-m-xylene			25 - 140%).			
	Decachlorobiphenyl	38.4	± \	∠∋ = 1#U9/.			

Login #L9811111 November 20, 1998 02:12 pm

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-01 Client Sample ID: WEIR 110598/COMP

Site/Work ID: PEDRICKTOWN DISPOSAL

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:03

Matrix: Water

Date Collected: 11/05/98

Dil. Type: N/A COC Info: N/A

/98 % Solid: N/A

Sample Weight: N/A Extract Volume: N/A

Instrument: HMS3 Method: 8270C\3510C Analyst: MDC Run ID: R56260

Lab File ID: 15015 Batch: WG49168

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
CAD W			ND	10	2	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	10	2	
95-57-8	2-Chlorophenol	ug/L	ND	10	2	
541-73-1	1 3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2	
95-50-1	1.2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Heyachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND	10	2 2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2.4-Dimethylphenol	ug/L	ND	10	2	
111-91-1	Rig(2-Chloroethoxy)Methane	ug/L	ND	10	2 2	
120-83-2	2.4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1.2.4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Nanhthalene	ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	10	2 2	
87-68-3	Herachlorobutadiene	ug/L	ND	10		
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2.Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Heyachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	- 2 A 6-Tricklorophenol	ug/ L	· ND	50	2	
95-95-4	2 4 5-Trichlorophenol	ug/u	ND	10	2	
91-58-7	2-Chloronaphthalene	ug/,u	ND	50	2	
88-74-4	2-Nitroaniline	ug/,μ	ND	10	2	
131-11-3	Dimethylphthalate	ug/_L	ND	10	2	
208-96-8	Acenaphthylene	ug/ը	ND	10	2	
606-20-2	2 6-Dinitrotoluene	ug/,u	ND	50	2	
99-09-2	- 3-Nitroaniline	ug/ <u>"</u> ப	ND	10	2	
83-32-9	Agenanhthene	ug/,H	ND	50	2	
51-28-5	2 4-Dinitrophenol	սց/ո	ND	50	2	
100-02-7	4-Nitrophenol	ug/ib	ND	10	2	
132-64-9	Dibenzofuran	ug/,u	ND	ĩò	2	
121-14-2	2.4-Dinitrotoluene	ug/, <u>u</u>	ND	īŏ	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L				

RL = Reporting Limit

more in

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-01 Client Sample ID: WEIR 110598/COMP Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:03

Dil. Type: N/A COC Info: N/A

Date Collected: 11/05/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C Instrument: HMS3

Run ID: R56260 Analyst: MDC Batch: WG49168 Lab File ID: 15015

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
		ug/L		ND	10	2	
86-73-7	Fluorene	ug/L		ND	50	2	
100-01-6	4-Nitroaniline	ug/L		ND	50	2	
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	10	2	
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2	
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2	
118-74-1	Hexachlorobenzene	ug/L		ND	50	2	
87-86-5	Pentachlorophenol	ug/L		ND	10	2	
85-01-8	Phenanthrene	ug/L		ND	10	2	
120-12-7	Anthracene	ug/L		ND	10	2	
86-74-8	Carbazole	ug/L		ND	10	2	
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2	
206-44-0	Fluoranthene	ug/L		ND	10	2	
129-00- <u>0</u>	Pyrene Butylbenzylphthalate	ug/L		ND	10	2	
85-68-7	Butylbenzylphthalate	ug/L		ND	20	2	
91-94-1	3,31-Dichlorobenzidine	ug/L		ND	10	2	
56-55-3	Benzo(a) anthracene	ug/L		ND	10	2	
218-01-9	Chrysenebis(2-Ethylhexyl)phthalate	ug/L		ND	10	2	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2	
117-84-0	Di-n-octvlphthalate	ug/L	•	ND	10	2	
205-99-2	Benzo(b) fluoranthene	ug/L		ND	10	2	
207-08-9	Benzo(k) fluoranthene	ug/L		ND	10	2	
50-32 - 8	Benzo (a) pyrene	ug/L		ND	10	2	
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ND	īŏ	$ar{2}$	
53-70-3	Dibenzo(a.h)Anthracene	ug/L		ND	1.0	$\bar{2}$	
191-24-2	Benzo(g,h,i) Perylene	.ug/L		ND	2.0		
SURR	OGATES- In Percent Recovery:	4		21 - 100%)			
	2-Fluorophenol		5.4	10 - 94%)			
	Phenol-d5		1.2	35 - 114%)			
	Nitrobenzene-d5		6.2	43 - 116%)			
	2-Fluorobiphenyl		8.0				
	2,4,6-Tribromophenol	10					
	p-Terphenyl-d14	<i>.</i> 9	1.8	33 - 141%)			
	h						

Product: 826-TCL - TCL Volatiles

Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9811111-01 Client Sample ID: WEIR 110598/COMP Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water Dil. Type: N/A COC Info: N/A

% Solid: N/A Date Collected: 11/05/98

Method: 8260B Instrument: HPMS9 TCLP Extract Date: N/A

Run ID: R56242 Batch : WG49239 Analyst: SLT Lab File ID: 9VR00242 Extract Date: N/A Analysis Date: 11/11/98 Time: 15:50

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/L		ND ND	10 10	1	
74-83-9	Bromomethane	ug/L		ND	īŏ	1	
75-01-4	Vinyl chloride	ug/L		ND	10.	1	
75-00-3	Chloroethane	ug/L		ND	5.0	1	
75-09-2	Methylene chloride	ug/L		ND	10	1	
67-64-1	AcetoneCarbon disulfide	ug/L ug/L		ND	5.0	1	
75-15-0		ug/L		ND	5.0	1	
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1	
75-34-3	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1	
540-59-0	Chloroform	ug/L		ND	5.0	1	
67-66-3	1.2-Dichloroethane	ug/L		ND	5.0	1	
107-06-2 78-93-3	2-Butanone	ug/L		ND	10	1	
71-55-6	1.1.1-Trichloroethane	ug/L		ND	5.0	1	
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1	
75-27-4	Bromodichloromethane	ug/L		ND	5.0	Ţ.	
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	<u> </u>	
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	<u> </u>	
79-01-6	Trichloroethene	uq/L		ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	uq/L		ND	5.0 5.0	<u> </u>	
71-43-2	Benzene	ug/L		ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	ī	
75-25-2	Bromoform	ug/L		ND	10	ī	
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	ī	
591-78-6	2-Hexanone	ug/L		ND		ī	
127-18-4	Tetrachloroethene	ug/L		ND ND	5.0	ī	
79-34-5	1.1.2.2-Tetrachloroethane	ug/L		ND	5.0	ī	
108-88-3	Toluene	ug/L		ND ND	5.0	ī	
108-90-7	Chlorobenzene	ug/L		ND	5.0	ī	
100-41-4	Erbyl benzene	ug/L		ND	5.0	ī	
100-42-5	Styrene	ug/L		ND	5.0	ī	
1330-20-7	Xylenes, Total	ug/L		ND	• • • • • • • • • • • • • • • • • • • •		
SURI	ROGATES- In Percent Recovery:	_		86 - 118%)			
	Dibromofluoromethane		2.0	80 - 120%)			
	1,2-Dichloroethane-d4		6.7 6.8	88 - 110%)			
	Toluene-d8		5.1	86 - 115%)			
	p-Bromofluorobenzene		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	

RL = Reporting Limit

Lab Sample ID: L9811111-02 Client Sample ID: INLET 110598/GRAB/TOP Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water

Collected: 11/05/98 1240

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Me	thod
Total Suspended Solids	mg/L	180000		500	100	N/A	DLN	11/09/98	11:45 16	0.2

Product: 808-PCE-W - PCB's (Water)

Lab Sample ID: L9811111-02 Client Sample ID: INLET 110598/GRAB/TOP Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/05/98

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 13:03

Instrument: HP10

Method: 8082/3550 Run ID: R56417

Analyst: CDB Lab File ID: 054R0101

Batch : WG49060

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	1.2 1.2 1.2 1.2 1.2 2.3 2.3	2.3 2.3 2.3 2.3 2.3 2.3 2.3
SURR	COGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	. 47.4 49.1	(13 - 154%) (25 - 140%)		

Sample Weight: N/A Extract Volume: N/A

74 Table 4 A A

Product: 827-TCL - TCL Semivolatiles

Dil. Type: N/A COC Info: N/A Lab Sample ID: L9811111-02 Client Sample ID: INLET 110598/GRAB/TOP Site/Work ID: PEDRICKTOWN DISPOSAL

% Solid: N/A Date Collected: 11/05/98

Matrix: Water

Method: 8270C\3510C Run ID: R56260 Instrument: HMS3 Analyst: MDC TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 16:47

Batch : WG49168 Lab File ID: 15016

CAS #	Compound	Unite	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L		ND	23	4.5
100-01-6	4-Nitroaniline	ug/L		ND	110	4.5
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	110	4.5
	Y With a adding a mine	ug/L		ND	23	4.5
86-30-6	N-Nitrosodiphenylamine	1100/I		ND	23	4.5
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	23	4.5
118-74-1	Hexachlorobenzene	ug/L		ND	110	4.5
87-86-5	Pentachlorophenol	ug/L		ND	23	4.5 4.5 4.5
85-01-8	Phenanthrene	ug/L		ND	23	4.5
120-12-7	Anthracene	ug/L		ND ND	23	4.5
86-74-8	Carbazole	ug/L			23	A 5
84-74-2	Di-N-Butylphthalate	ug/L		ND	23	4.5 4.5 4.5
206-44-0	Fluoranthene	ua/L	•	йD		1.5
129-00-0	Pyrene	ug/L		ND	23	4.5
85-68-7	Butylbenzylphthalate	uğ/L		ND	23	4.5
91-94-1	3.3'-Dichlorobenzidine	ug/L	•	ND	45	4.5
56-55-3	Benzo (a) anthracene	ug/L		ND	23	4.5
218-01-9	Chrysene	ug/L		ND	23	4.5
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	23	4.5
117-84-0	Di-n-octylphthalate	ug/L		ND	23	4.5
205-99-2	Benzo (b) fluoranthene	ug/L		ND	23	4.5
207-08-9	Benzo (k) fluoranthene	ug/L		ND	23	4.5
50-32-8	Benzo (a) pyrene	ug/L		ND	23	4.5 4.5
	Tadawa (1 2 3 ad) numana	ug/L		ND	23	4.5
193-39-5	Indeno (1, 2, 3-cd) pyrene	ug/L		ND	23	4.5
53-70-3	Diberizo (a, h) Anthracene	ug/L		ND	. 23	4.5
191-24-2	Benzo(g,h,i)Perylene	ug/ n		5.0		
CITE	OGATES- In Percent Recovery:					
SURF	2-Fluorophenol		42.5 (21 - 100%)		
	Z-FIGOLOPHEHOT		30.0	10 - 94%)		•
	Phenol-d5		60.2	35 - 114%)		
	Nitrobenzene-d5		59.8	43 - 116%)		
	2-Fluorobiphenyl		83.6	10 - 123%)		
	2,4,6-Tribromophenol		03.0	33 - 141%)		
	p-Terphenyl-d14		85.5 (JJ " = #+ #/		

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-02 Client Sample ID: INLET 110598/GRAB/TOP Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/05/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: N/A Instrument: HPMS9
Analyst: SLT
Lab File ID: 9VR00243 Method: 8260B Run ID: R56242 Analysis Date: 11/11/98 Time: 16:25 Batch : WG49239

74-87-3 Chloromethane	1 1 1 1
74-83-9 Bromomethaneug/L ND 10	1 1 1
78 A4 A 11 - 11 - 11 - 11 - 11 - 11 - 11 -	1
75-01-4 Vinyl chloride ug/L ND 10	ī
75-00-3 Chloroethane $u\sigma/I_c$ ND 10	
75-09-2 Methylene chloride	
67-64-1 Acetone 11g/T. ND 10	ī
75-15-0 Carbon disulfide	ī
75-35-4 1,1-Dichloroethene ug/L ND 5.0	ī
75-34-3 1,1-Dichloroethane $u\ddot{a}/L$ ND 5.0	ī
540-59-0 1,2-Dichloroethene (Total)ug/L ND 5.0	ī
67-66-3 Chloroform	ī
107-06-2 1,2-Dichloroethane ug/L ND 5.0	1
78-93-3 2-Butanone ND 10	1
71-55-6 1,1,1-Trichloroethane ug/L ND 5.0	1
$56-23-5$ Carbon tetrachloride ug/I_c ND 5.0	1
75-27-4 Bromodichloromethane ug/L ND 5.0	1
78-87-5 1,2-Dichloropropane uq/L ND 5.0	1
10061-01-5 Cis-1,3-Dichloropropene ug/L ND 5.0	1
79-01-6 Trichloroethene ug/L ND 5.0	1
124-48-1 Dibromochloromethane ug/L ND 5.0	1
79-00-5 1,1,2-Trichloroethane ug/L ND 5.0	1
71-43-2 Benzene va/L ND 5.0	1
10061-02-6 trans-1,3-Dichloropropene ug/L ND 5.0	1
75-25-2 Bromororm	1
108-10-1 4-Methyl-2-pentanone ug/L ND 10	1
591-78-6 2-Hexanone	1
127-18-4 Tetrachloroethene	1
79-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0	1
108-88-3 Toluene ND 5.0	1
108-90-7 Chlorobenzene ug/L ND 5.0	1
100-41-4 Ethyl benzene ug/L ND 5.0	1
100-42-5 Styrene	1
1330-20-7 Xylenes, Total	1
SURROGATES- In Percent Recovery:	
Dibromofluoromethane	
1,2-Dichloroethane-d4 89.3 (80 - 120%)	
Toluene-d8 96.4 (88 - 110%)	
p-Bromofluorobenzene	

KEMRON KNUTRONMENTAL SERVICES

Product: 808-PCB-S - PCB's (Soil)

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil

Date Collected: 11/05/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: 16

Instrument: HP10 Analyst: CDB

Method: 8082/3550 Run ID: R56418

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 13:39

Lab File ID: 055R0101

Batch: WG49059

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	ND ND ND ND ND ND ND	100 100 100 100 100 210 210	1 1 1 1 1 1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	72.1 98.8	(29 - 133%) (30 - 173%)			

Lab Sample ID: L9811111-03 Client Sample ID: INLET 110598/GRAB/BOTTOM Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Soil Collected: 11/05/98 1240

% Solid: 16

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Percent Solids	% wt.	16		1.0	1	A/N	DIH	11/06/98	12:45	D2216-90

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil Dil. Type: N/A COC Info: N/A

Date Collected: 11/05/98

% Solid: 16

Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time:

Instrument: HP9
Analyst: ECL
Lab File ID: 1288

Method: 8081A\3550B

Run ID: R56132 Batch : WG49090

		•			
CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	/1			
319-85-7	beta-BHC.	ug/kg	ND	10	1
319-86-8	delta-BHC.	ug/kg	ND	10	1
58-89-9	gamma-BHC (Lindane)	ug/kg	ND	10	1
76-44-8	Heptachlor	ug/kg	ND	10	1
309-00-2	Aldrin	ug/kg	ND	10	1
1024-57-3	Aldrin Heptachlor epoxide	ug/kg	ND	10	1
959-98-8	Endogulfan T	ug/kg	ND	10	1
60-57-1	Endosulfan I	ug/kg	ND	10	1
72-55-9	Dieldrin	ug/kg	ND	21	1
72-20-8	4,4'-DDE	ug/kg	ND	21	1
33213-65-9	Endrin.	ug/kg	ND	21	1
72-54-8	Endosulfan II.	ug/kg	ND	21	1
1031-07-8	4,4'-DDD.	ug/kg	ND	21	1
	biidosulian sullare	ug/kg	ND	21	ī
50-29-3	4,4'-DDT	ug/kg	ND	21	1
72-43-5	Methoxychior	ug/kg	ND	100	ī
53494-70-5	Endrin Ketone	ug/kg	ND	21	ī
7421-93-4	Endrin aldenvde	ug/kg	ND	21	ī
5103-71-9	alpha Chiordane	ug/kg	ND	īō	ī
5103-74-2	gamma Chiordane	ug/kg	ND	īŏ	ī
8001-35-2	Toxaphene	ug/kg	ND	21ŏ	ī
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	C1 2	/ 00 1228		
	Decachlorohinhanyl	61.3	(29 - 133%)	•	
• •	Decachlorobiphenyl	85.9	(30 - 173%)		

Product: 826-TCL - TCL Volatiles

Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9811111-03
Client Sample ID: INLET 110598/GRAB/BOTTOM
Site/Work ID: PEDRICKTOWN DISPOSAL
Matrix: Soil Dil. Type: N/A COC Info: N/A

% Solid: 16

Date Collected: 11/05/98

Method: 8260B Instrument: HPMS6 TCLP Extract Date: N/A Analyst: CMS Run ID: R56112

Extract Date: N/A
Analysis Date: 11/10/98 Time: 18:14 Batch : WG49175 Lab File ID: 6VR11352

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/kg	ND	63	1	
74-83-9	Bromomethane	ug/kg	ND	63	1	
75-01-4	Vinyl chloride	ug/kg	ND	63	1	
75-00-3	Chloroethane	ug/kg	ND	63	1	
75-09-2	Methylene chloride	ug/kg	ND	31	1	
67-64-1	Acetone	ug/kg	160	63	1	
75-15-0	Carbon disulfide	ug/kg	ND	31	1	
75-35-4	1,1-Dichloroethene	ug/kg	ND	31	<u>ī</u>	
75-34-3	1,1-Dichloroethane	ug/kg	ND	31	1	
540-59-0	1,2-Dichloroethene (Total)	ug/kg	ND	31	<u> </u>	
67-66-3	Chloroform	ug/kg	ND	31	±	
107-06-2	1,2-Dichloroethane	ug/kg	ND	31	_	
78-93-3	2-Butanone	ug/kg	ND	63	"	
71-55-6	1,1,1-Trichloroethane	ug/kg	йD	31	± •	
56-23-5	Carbon tetrachloride	ug/kg	ŇD	31 31	†	
75-27-4	Bromodichloromethane	ug/kg	ND	31	i	
78-87-5	1,2-Dichloropropane	ug/kg	ND ND	31	ī	
10061-01-5	cis-1,3-Dichloropropene	ug/kg	ND ND	31	ī	
79-01-6	Trichloroethene	ug/kg	ND	31	ī	
124-48-1	Dibromochloromethane	ug/kg	ND	31	ī	
79-00-5	1,1,2-Trichloroethane	ug/kg	ND	31	ī	
71-43-2	Benzene	ug/kg	ND	31	ī	
10061-02-6	trans-1,3-Dichloropropene	ug/kg	ND	31	1	
75-25-2	Bromoform	ug/kg	ND	63	1	
108-10-1	4-Methyl-2-pentanone	ug/kg	ND	63	1	
591-78-6	2-Hexanone	ug/kg ug/kg	ND	31	1	
127-18-4	Tetrachloroethene	ug/kg	ND	31	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	ND	31	1	
108-88-3	Toluene	ug/kg	ND	31	1	
108-90-7	Chlorobenzene	ug/kg	ND	31	1	
100-41-4	Ethyl benzene	ug/kg	ND	31	1	
100-42-5	Styrene	ug/kg	ND	31	1	
1330-20-7	Xylenes, Total	ug/ng				
SURR	OGATES- In Percent Recovery:		4 40-01			
50111	Dibromofluoromethane	109	(80 - 120%)			
	1,2-Dichloroethane-d4	118	(80 - 120%)			
	Toluene-d8	115	(81 - 117%)			
	p-Bromofluorobenzene	115	(74 - 121%)			

RL = Reporting Limit

Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water

Collected: 11/05/98 1205

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	25		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/05/98

Sample Weight: N/A

Extract Volume: N/A

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/10/98 Time: 13:24

Instrument: HP10

Method: 8082/3550

% Solid: N/A

Analyst: CDB Lab File ID: 059R0101

Run ID: R56138 Batch: WG49060

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.63 0.63 0.63 0.63 1.3	1.25 1.25 1.25 1.25 1.25 1.25
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	54.0 52.8	(13 - 154%) (25 - 140%)		

KEMRON ENVIRONMENTAL SERVICES

Login #L9811111 November 20, 1998 02:12 pm

Product: 8081P - Organochlorine Pesticides

Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL Dil. Type: N/A COC Info: N/A

% Solid: N/A

Matrix: Water Date Collected: 11/05/98

Method: 8081A\3510C Instrument: HP9

TCLP Extract Date: N/A Extract Date: 11/09/98 Analysis Date: 11/11/98 Time: Run ID: R56303 Analyst: ECL Batch : WG49091 Lab File ID: 1293

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.063	1.25
319-85-7	beta-BHC	uā/L	МD	0.063	1.25
319-86-8	delta-BHC	uq/L	ND	0.063	1.25
58-89-9	gamma-BHC (Lindane)	uor/L	ND	0.063	1.25
76-44-8	Heptachlor	na/r	MD	0.063	1.25
309-00-2	Aldrin	uq/L	ND	0.063	1.25
1024-57-3	Heptachlor epoxide	uq/L	ND	0.063	1.25
959-98-8	Endosulfan I	ug/L	ND	0.063	1.25
60-57-1	Dieldrin	ug/L	ND	0.13	1.25 1.25
72 - 55-9	4,4'-DDE	ug/L	ND	0.13	1.25
72-20-8	Endring	ug/L	ИD	0.13	1.25
33213-65-9	Endosulfan II	ug/L	ХD	0.13 0.13	1.25
72-54-8	4,4'-DDD	ug/L	ND	0.13	1.25
1031-07-8	Endosulfan sulfate	ug/L	MD	0.13	1.25
50-29-3	4,4'-DDT	ug/L	ND ND	0.13	1.25
72-43-5	Methoxychlor	ug/L	ND ND	0.03	1.25
53494-70-5	Endrin ketone	ug/L	ND ND	0.13	1.25
7421-93-4	Endrin aldehyde	ug/L	ND ND	0.063	1.25
5103-71-9	alpha Chlordane	ug/L	ND ND	0.063	1.25
5103-74-2	gamma Chlordane	ug/L	ND	1.3	1.25
8001-35-2	Toxaphene	ng/r	ND	1.3	1.47
SURR	OGATES- In Percent Recovery:				
- •	2,4,5,6-Tetrachloro-m-xylene		(13 - 154%)		
•	Decachlorobiphenyl	59	.5 (25 - 140%)	•	

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL

TCLP Extract Date: N/A
Extract Date: 11/09/98
Analysis Date: 11/11/98 Time: 17:30

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/05/98 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8270C\3510C

Instrument: HMS3 Analyst: MDC Lab File ID: 15017 Run ID: R56260 Batch: WG49168

108-95-2 Phenol ug/L ND 12 2.3 111-44-4 Bis (2-Chloroethyl) ether. ug/L ND 12 2.3 95-57-8 2-Chlorophenol. ug/L ND 12 2.3 541-73-1 1,3-Dichlorobenzene. ug/L ND 12 2.3 106-46-7 1,4-Dichlorobenzene. ug/L ND 12 2.3 95-50-1 1,2-Dichlorobenzene. ug/L ND 12 2.3 95-48-7 2-Methylphenol. ug/L ND 12 2.3 108-60-1 108-60-1 ug/L ND 12 2.3	ion
95-57-8 2-Chlorophenol ug/L ND 12 2.3 541-73-1 1,3-Dichlorobenzene ug/L ND 12 2.3 106-46-7 1,4-Dichlorobenzene ug/L ND 12 2.3 95-50-1 1,2-Dichlorobenzene ug/L ND 12 2.3 95-40-7 3,4-Dichlorobenzene ug/L ND 12 2.3	
S41-73-1	
106-46-7 1,4-Dichlorobenzene	
95-50-1 1,2-Dichlorobenzene	
95-30-1 1,2-Dichloropenzene ug/L ND 12 2.3	
100-00-1 0)8//-('0)07010007000)\arbox	
621-64-7 N-Nitroso-di-n-propylamine ug/L ND 12 2.3	
67-72-1 Hexachloroethane 12 2.3	
98-95-3 Nitrobenzene	
/X=NY=	
88-75-5 2-Witronbonol 12 2.3	
111-91-1 Pig/2 Chlorida 12 2.3	
100 00 = 1/1 The transfer of t	
12 2 3 1	
106 A7 0 A 753 - 12 2.3	
00 co 5 m 10 12 2.3	
$\frac{1}{2}$	
ND 12 2.3	
91-57-6 2-Methylnaphthalene	
77-47-4 Hexachlorocyclopentadiene	
co-uc-z z,4,6-irichiorophenoiuq/L MD 12 2.3	
95-95-4 2,4,5-Trichlorophenol. ug/L ND 58 2.3 91-58-7 2-Chloronaphthalene. ug/L ND 12 2.3 88-74-4 2-Nitroaniline. ug/L ND 58 2.3 131-11-3 Dimethylphthalate. ug/L ND 58 2.3 208-96-8 According 12 2.3	
91-58-7 2-Chloronaphthaleneug/L ND 12 2.3	
88-74-4 2-Nitroaniline	
131-11-3 Dimethylphthalate ug/L ND 12 2.3	
208-96-8 Acenaphthylene	
606-20-2 2,6-Dinitrotoluene	
99-09-2 3-Nitroaniline ug/L ND 58 2.3	
83-32-9 Acenaphthene	
51-28-5 2,4-Dinitrophenol	
100-02-7 4-Nitrophenolug/L ND 58 2.3	
132-64-9 Dibenzofuran ug/L ND 12 2.3	
121-14-2 2,4-Dinitrotoluene ug/L ND 12 2 3	
84-66-2 Diethylphthalate ug/L ND 12 2.3	
84-66-2 Diethylphthalate ug/L ND 12 2.3 7005-72-3 4-Chlorophenyl-phenyl ether ug/L ND 12 2.3	

Login #L9811111 November 20, 1998 02:12 pm

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL Matrix: Water Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

% Solid: N/A

Date Collected: 11/05/98

Method: 8270C\3510C

TCLP Extract Date: N/A Extract Date: 11/09/98 Instrument: HMS3
Analyst: MDC
Lab File ID: 15017 Run ID: R56260 Analysis Date: 11/11/98 Time: 17:30 Batch : WG49168

86-73-7 Fluorene. ug/L ND 12 2.3 100-01-6 4-Nitroaniline ug/L ND 58 2.3 86-30-6 N-Nitrosodiphenylamine ug/L ND 12 2.3 101-55-3 4-Rromophenyl-phenylamine ug/L ND 12 2.3 118-74-1 Hexachlorobenzene ug/L ND 12 2.3 118-74-1 Hexachlorobenzene ug/L ND 12 2.3 87-86-5 Pentachlorophenol ug/L ND 12 2.3 87-86-5 Pentachlorophenol ug/L ND 12 2.3 88-01-8 Phenanthrene ug/L ND 12 2.3 88-01-8 Phenanthrene ug/L ND 12 2.3 86-74-8 Carbazole ug/L ND 12 2.3 86-74-8 Carbazole ug/L ND 12 2.3 84-74-2 Di-N-Butylphthalate ug/L ND 12 2.3 206-44-0 Fluoranthene ug/L ND 12 2.3 2129-00-0 Pyrene. ug/L ND 12 2.3 213-01-9 Fyrene. ug/L ND 12 2.3 91-94-1 3,3'-Dichlorobenzidine ug/L ND 12 2.3 91-94-1 3,3'-Dichlorobenzidine ug/L ND 23 2.3 91-94-1 3,3'-Dichlorobenzidine ug/L ND 12 2.3 117-84-0 Di-n-octylphthalate ug/L ND 12 2.3 117-84-0 Di-n-o	CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
100-01-6	86-73-7	Fluorene	ug/L	ND	12		
Side	100-01-6	4-Nitroaniline			58	2.3	
No. No.	534-52-1	4.6-Dinitro-2-methylphenol		ND	58	2.3	
18-/4-1 Hexachlorophenol Ug/L ND 12 2.3	86-30-6	N-Nitrosodiphenylamine	ug/L	ND	12	2.3	
18-/4-1 Hexachlorophenol Ug/L ND 12 2.3	101-55-3	4-Bromophenyl-phenylether	ug/L	ND	12	2.3	
87-86-5 Pentachlorophenol Ug/L ND 58 2.3	118-74-1	Hexachlorobenzene	ug/L	ND		2.3	
## 85-01-8 Phenanthrene.	87-86-5	Pentachlorophenol	ug/L	ND		2.3	
120-12-7	85-01-8	Phenanthrene	ug/L	ND		2.3	
86-74-8 Carbazole	120-12-7	Anthracene	uq/L	ND		2.3	
84-74-2 Di-N-Butylphthalate ug/L ND 12 2.3 206-44-0 Fluoranthene ug/L ND 12 2.3 129-00-0 Pyrene ug/L ND 12 2.3 85-68-7 Butylbenzylphthalate ug/L ND 12 2.3 91-94-1 3,3'-Dichlorobenzidine ug/L ND 23 2.3 56-55-3 Benzo(a) anthracene ug/L ND 12 2.3 218-01-9 Chrysene ug/L ND 12 2.3 218-01-9 Chrysene ug/L ND 12 2.3 117-81-7 bis(2-Ethylhexyl)phthalate ug/L ND 12 2.3 117-84-0 Di-n-octylphthalate ug/L ND 12 2.3 205-99-2 Benzo (b) fluoranthene ug/L ND 12 2.3 207-08-9 Benzo (k) fluoranthene ug/L ND 12 2.3 50-32-8 Benzo (a) pyrene ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd) pyrene	86-74-8	Carbazole	ug/L		12	2.3	
85-68-7 Butylbenzylphthalate. ug/L ND 12 2.3 91-94-1 3,3'-Dichlorobenzidine. ug/L ND 23 2.3 56-55-3 Benzo(a) anthracene. ug/L ND 12 2.3 128-01-9 Chrysene. ug/L ND 12 2.3 117-81-7 bis(2-Ethylhexyl)phthalate. ug/L ND 12 2.3 117-84-0 Di-n-octylphthalate. ug/L ND 12 2.3 1205-99-2 Benzo(b)fluoranthene. ug/L ND 12 2.3 205-99-2 Benzo(b)fluoranthene. ug/L ND 12 2.3 207-08-9 Benzo(k)fluoranthene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 191-24-2 Benzo(g,h,i)Perylene. ug/L ND 12 2.3 191-24-2 Benzo(g,h,i)Perylene. ug/L ND 12 2.3 191-24-2 In Percent Recovery:	84-74-2	Di-N-Butylphthalate	ug/L	ND		2.3	
85-68-7 Butylbenzylphthalate. ug/L ND 12 2.3 91-94-1 3,3'-Dichlorobenzidine. ug/L ND 23 2.3 56-55-3 Benzo(a) anthracene. ug/L ND 12 2.3 128-01-9 Chrysene. ug/L ND 12 2.3 117-81-7 bis(2-Ethylhexyl)phthalate. ug/L ND 12 2.3 117-84-0 Di-n-octylphthalate. ug/L ND 12 2.3 1205-99-2 Benzo(b)fluoranthene. ug/L ND 12 2.3 205-99-2 Benzo(b)fluoranthene. ug/L ND 12 2.3 207-08-9 Benzo(k)fluoranthene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 193-39-5 Indeno(1,2,3-cd)pyrene. ug/L ND 12 2.3 191-24-2 Benzo(g,h,i)Perylene. ug/L ND 12 2.3 191-24-2 Benzo(g,h,i)Perylene. ug/L ND 12 2.3 191-24-2 In Percent Recovery:	206-44-0	Fluoranthene	ug/L	ND		2.3	
85-68-7 Butylbenzylphthalate. ug/L ND 12 2.3 191-94-1 3,3'-Dichlorobenzidine. ug/L ND 23 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3	129-00-0	Pyrene	uq/L			2.3	
Se-55-3 Benzo(a)anthracene. Ug/L ND 12 2.3	85-68-7	Butylbenzylphthalate	ug/L			2.3	
Se-55-3 Benzo(a)anthracene. Ug/L ND 12 2.3	91-94-1	3,3 ¹ -Dichlorobenzidine	ug/L			2.3	
218-01-9 Chrysene	56-55-3	Benzo (a) anthracene	ug/L			2.3	
117-81-7 bis (2-Ethylhexyl) phthalate ug/L 117-84-0 Di-n-octylphthalate ug/L 205-99-2 Benzo (b) fluoranthene ug/L 207-08-9 Benzo (k) fluoranthene ug/L 50-32-8 Benzo (a) pyrene ug/L 193-39-5 Indeno (1,2,3-cd) pyrene ug/L 53-70-3 Dibenzo (a,h) Anthracene ug/L 191-24-2 Benzo (g,h,i) Perylene ug/L SURROGATES- In Percent Recovery:	218-01-9	Chrysene	ug/L			2.3	
117-84-0 Di-n-octylphthalate Ug/L ND 12 2.3	117-81-7	bis(2-Ethylhexyl)phthalate	ug/L			2.3	
205-99-2 Benzo (b) fluoranthene ug/L 207-08-9 Benzo (k) fluoranthene ug/L 50-32-8 Benzo (a) pyrene ug/L 193-39-5 Indeno (1,2,3-cd) pyrene ug/L 53-70-3 Dibenzo (a,h) Anthracene ug/L 191-24-2 Benzo (g,h,i) Perylene ug/L SURROGATES- In Percent Recovery:		Di-n-octylphthalate	ug/L			2.3	
193-39-5 Indeno(1,2,3-cd) pyrene ug/L ND 12 2.3 53-70-3 Dibenzo(a,h) Anthracene ug/L ND 12 2.3 191-24-2 Benzo(g,h,i) Perylene ug/L ND 12 2.3 SURROGATES- In Percent Recovery:	205-99-2	Benzo (b) fluoranthene	ug/L		12	2.3	
193-39-5 Indeno(1,2,3-cd) pyrene ug/L ND 12 2.3 53-70-3 Dibenzo(a,h) Anthracene ug/L ND 12 2.3 191-24-2 Benzo(g,h,i) Perylene ug/L ND 12 2.3 SURROGATES- In Percent Recovery:		Benzo(k) fluoranthene	ug/L			2.3	
193-39-5 Indeno(1,2,3-cd)pyrene		Benzo(a)pyrene	ug/L			2.3	
53-70-3 Dibenzo(a,h)Anthracene	193-39-5	Indeno (1,2,3-cd) pyrene	ug/L		12	2.3	
191-24-2 Benzo(g,h,i) Perylene ug/L ND 12 2.3 SURROGATES- In Percent Recovery:		Dibenzo (a, h) Anthracene	uq/L		12	2.3	
SURROGATES- In Percent Recovery: 2-Fluorophenol 52 5 (21 - 100%)	191-24-2	Benzo (g, h, i) Perylene	ug/L	ND	12 .	2.3	
2-Fluorophenol 52 5 (21 - 100%)	SIIBR	OGNTES. In Percent Recovery:					
	50.4.	2-Fluorophenol	52.5	(21 - 100%)			
Phenol-d5		Dhanal -dE					
Nitrobenzene-d5		Nitrohanzane_dE		1 			
		2-Pluorohinhenyi					
2-Fluorobiphenyl		2 4 6-Tribromonhenol					
p-Terphenyl-d14		n-Ternhenyl-d14					

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811111-04 Client Sample ID: MIX 110598 Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water

Date Collected: 11/05/98

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/11/98 Time: 17:01

Instrument: HPMS9 Analyst: SLT Lab File ID: 9VR00244

Method: 8260B Run ID: R56242 Batch : WG49239

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane					
74-83-9	Bromomethane.	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		· ND	10	1
75-00-3	Chloroethane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	10	1
67-64-1	Acetone	ug/L		ND	5.0	1
75-15-0	Acetone. Carbon disulfide.	ug/L	13		10	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3		ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1
67-66-3	Chloroform.	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1
78-93-3	2-Butanone.	ug/L		ND	5.0	1
71-55- <i>6</i>	1,1,1-Trichloroethane	ug/L		ND	10	1
56-23-5	Carbon tetrachloride	ng/r		ND	5.0	1
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1
10061-01-5	Cis-1.3-Dichloropropene	ug/L		ND	5.0	1
79-01-6	cis-1,3-Dichloropropene. Trichloroethene.	ug/L		ND	5.0	1
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1
71-43-2	Benzene	ug/L		ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene.	ug/L		ND	5.0	1
75-25-2	Bromoform.	ug/L		ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L		ND	5.0	1
591-78-6	4~Hexanone	ug/L		ND .	10	1
127-18-4	Tetrachloroethene	ug/L		ND	10	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1
108-88-3	Toluene	ug/L		ND	5.0	1
108-90-7	Chlorobenzene	ug/L		ND	5.0	1
100-41-4	Ethyl benzene	ug/L		ND	5.0	1
100-42-5	Styrene	ug/L		ND	5.0	1
1330-20-7	Styrene	ug/L		ND	5.0	1
1000-20-7	Xylenes, Total	ug/L		ND	5.0	1
SURR	OGATES- In Percent Recovery:					
	Dibromofluoromethane	91.	=	26 1104)		
	1,2-Dichloroethane-d4	88.4	- , ,	36 - 118%) 30 - 120%)		
•	Toluene-d8	97.				
	p-Bromofluorobenzene		, ,	38 - 110%)		
	E	94.5) ({	36 - 115%)		

KEMRON ENVIRONMENTAL SERVICES

Login #L9811111 November 20, 1998 02:12 pm

Lab Sample ID: L9811111-05 Client Sample ID: WEIR 110498 Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water Collected: 11/04/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	23		5.0	1	N/A	DLN	11/09/98	11:45	160.2

Lab Sample ID: L9811111-06 Client Sample ID: WEIR 110398 Site/Work ID: PEDRICKTOWN DISPOSAL

Matrix: Water Collected: 11/03/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
Total Suspended Solids	mg/L	20		5.0	1	N/A	DLN	11/09/98	11:45 160.2

Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG48996	R55802	L9811111-03	Soil	Percent Solids	D2216-90	DIH	05-N()V-1998	06-NOV-1998		Conventionals
WG49010	R56132	L9811111-03	Soil	Organochlorine Pesticides	8081A\3550B	ECL	05-NOV-1998	10-NOV-1998		Extraction
WG49011	R56418	L9811111-03	Soil	PCB's (Soil)	8082/3550	CDB	05-N()V-1998	11-NOV-1998	13:39	Extraction
WG49013	R56302	L9811111-01		Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		7
WG49013	R56302	L9811111-02	Water	Organochlorine Pesticides		ECL	05-NOV-1998			Extraction
WG49013	R56303	L9811111-04	Water	Organochlorine Pesticides	8081A\3510C	ECF	05-NCV-1998			Extraction Extraction
WG49015	R56138		_					22 3.07 2330		Exclaction
WG49015		L9811111-01		PCB's (Water)	8082/3550	CDB	05-NCV-1998	10-NOV-1998	12:48	Extraction
WG49015	R56417	L9811111-02		PCB's (Water)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:03	Extraction
MG43012	R56138	L9811111-04	Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998		13:24	Extraction
WG49030	R56260	L9811111-01	Water	TOTAL CONTRACTOR AND ADDRESS OF THE PARTY OF						
WG49030	R56260	L9811111-02	Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:03	Extraction
WG49030	R56260	L9811111-04	Water	TCL Semivolatiles	8270C\3510C	MDC	05- NO V-1998	11-NOV-1998	16:47	Extraction
		23012211-04	water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	17:30	Extraction
WG49031	R56167	L9811111-03	Soil	TCL Semivolatiles	8270C\3550B	MLS	05-NOV-1998	11-NOV-1998	15:42	Extraction
WG49059	R56410	L9811111-03	Soil	PCB's (Soil)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:39	Semivolatile - GC
WG49060	R56138	L9811111-01	Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	12:48	Semivolatile - GC
WG49060	R56417	L9811111-02	Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	11-NOV-1998	13:03	Semivolatile - GC
WG49060	R56130	L9811111-04	Water	PCB's (Water)	8082/3550	CDB	05-NOV-1998	10-NOV-1998	13:03	Semivolatile - GC
WG49090	R56132	L9811111-03	Soil							
		47012211-03	5011	Organochlorine Pesticides	8081A\3550B	ECL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091		L9811111-01	Water	Organochlorine Pesticides	8081A\3510C	BCL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091	R56302	L9811111-02	Water	Organochlorine Pesticides	8081A\3510C	ECL	05-NOV-1998	10-NOV-1998		Semivolatile - GC
WG49091	R56303	L9811111-04	Water	Organochlorine Pesticides	8081A\3510C	ECL		11-NOV-1998		Semivolatile - GC
WG49125	R56167	L9811111-03	Soil	TCL Semivolatiles	8270C\3550B	MLS		11-NOV-1998	15:42	Semivolatile - GC/MS

WG49168		L9811111-01	Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:03	Semivolatile - GC/MS
WG49168		L9811111-02	Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	16:47	Semivolatile - GC/MS
WG49168	R56260	L9811111-04	Water	TCL Semivolatiles	8270C\3510C	MDC	05-NOV-1998	11-NOV-1998	17:30	Semivolatile - GC/MS
WG49172	R56038	L9811111-01	Water	Total Suspended Solids	160.2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-02	Water	Total Suspended Solids	160:2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-04	Water	Total Suspended Solids	160.2	DLN	05-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-05	Water	Total Suspended Solids	160.2	DLN	04-NOV-1998	09-NOV-1998	11:45	Conventionals
WG49172	R56038	L9811111-06	Water	Total Suspended Solids	160.2	DLN			11:45	Conventionals
					• ••					
WG49175	R56112	L9811111-03	Soil	TCL Volatiles	8260B	CMS	05-NOV-1998	10-NOV-1998	18:14	Volatile - GC/MS

Order #: 98-11-111 November 20, 1998 02:12 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Analyst	Date Collected	Run Date	Run Time	Department
WG49239	R56242	L9811111-01	Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	15:50	Volatile - GC/MS
WG49239	R56242	L9811111-02	Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	16:25	Volatile - GC/MS
WG49239	R56242	L9811111-04	Water	TCL Volatiles	8260B	SLT	05-NOV-1998	11-NOV-1998	17:01	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - Ann L. Clark BAD - - Becky A. Diehl CEB - - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens CRC - Carla R. Cochran DIH - - Deanna I. Hesson DKM - - Dewey K. Miller DLN - - Deanna L. Norton DLP - - Dorothy L. Payne ECL - - Eric C. Lawson FEH - - Fay E. Harmon HV - - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH - - Ji Y. Hu KHA - - Kim H. Archer KMS - - Kevin M. Stutler KRA - - Kathy R. Albertson MDA - - Mike D. Albertson

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - . Michael L. Schimmel MMB - - Maren M. Beerv RDC - - Rebecca D. Cutlin RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - - Robert E. Kver RSS - - Regina S. Simmons RWC - - Rodney W. Campbell SIK - - Sindy J. Kinney SIM - - Shawn J. Marshall SLP - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TJW - - Thomas J. Ware TRS - Todd R. Stack VC - - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	ifier Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
В	Present in the method blank	NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	
D	The analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
Ţ	Present below nominal reporting limit	_ :	Too numerous to count
Ţ		U	Analyzed for but not detected
L	Sample reporting limits elevated due to matrix interference	w	Post-digestion spike for furnace AA out of control limits
M	Duplicate injection precision not met	w X	Can not be resolved from isomer. See below.
		Λ	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC



KEMRON ENVIRONMENTAL SERVICES OHIO VALLEY LABORATORY QUALITY CONTROL SUMMARY

WORKGROUP: wg49172

METHOD: 160.2

MATRIX: Water

RUN DATE: 11/9/98

ANALYST: di

UNITS: mg/L

DUPLICATE: 11-111-02

											•	PERC	ENT RECO	OVERY		PERCEN	T RPD
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	UCL UCL	MS	MS LCL	MS UCL	REP RPD	RPD UCL
TSS	5.00	ND	50.00	50,00	177000.00	178000.00	NR	NR	NR	100.0	81.0	114.5	NR	NR	NR	0.56	20.00

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT UCL = UPPER CONTROL LIMIT REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

Page 1

ORGANIC QA/QC



Method: 8260A

Run Date: 11/10/98 Instrument ID: HPMS_6 LCS2 FLNM: NA SMPL Num: 11-132-01

LCS DF: SMPL DF:

Matrbc Soil Units: ug/kg

BLK FLNM: 68K11340 BLK2 FLNM:

SMPL FLNM: 6BR11342 MS FLNM: 6BR11343.D

MS DF: MSD DF: 1

LCS FLNM: 6QC11341.D

MSD FLNM: 68R11344.D

					~	NCENTRA	TION DE				<u> </u>									
				4 10-1-				-			 				NT REC	OVERY				ENT RPO
li de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	RDL	BLK	BLK2	1.00	1.000	LCS Spik				MS Spike			LCS	LCS			MS	MS	MS	RPD
Toract Analysis				LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ид/кд	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	. %	<u>%</u>	%	%	%	%	%	%	%	%
dichlorodifluoromethane chloromethane	10.0	ND	, ND	17.5	NA .	20.0	in ND	15.4	17.3	20.0	87.3	NA	46.0	152.0	् 77.1≒	⊹85.5	46.0	152.0	11.6	20.0
\$696865666666666666666666666666666666666	10.0	ND	ND	20.0	NA strong en envisor	20.0	ND	17.6	19.1	20.0	99.8	NA .	64.0	140.0	87.8	95.7	64.0	140.0	8.6	20.0
vinyl chloride	10.0	ND	ND	23.5	NA .	∴ 20.0	ND	20.8	21.3	20.0	117.7	NA .	70.0	137.0	104.1	106.3	70.0	137.0	2,1	20.0
bromomethene	10.0	ND	ND	25.2	NA	20.0	ND	21,9	21.5	20.0	126.1	N/A	62.0	147.0	109.5	107.5	62.0	147.0	1.8	20.0
chloroethane	10.0	ND	ND	23.2	NA .	0.20.0	ND	20.1	: 21.0 ⊹	্ 20.0	116.1	NA.	69.0	136.0	100.6	105.2	69,0	136.0	4.5	20.0
trichiorofluoromethane	10.0	ND	ND	21.0	NA	20.0	ND	17.4	19.2	20.0	105.1	NA	70.0	134.0	87.2	95.8	70.0	134.0	9.5	20.0
freon 113	10.0	ND	ND	NA :	NA .	20.0	ND	NA .	NA .	20.0	NA	NA	NA .	NA	NA.	NA.	NA.	NA I	NA	20.0
acelone	100.0	3.2	ND	22.5	NA	20.0	4.8	21.0	24.3	20,0	112.4	NA	14.0	171.0	80.7	97.4	14.0	171.0	14.7	20.0
1,1-dictionoethene	5.0	ND	ND	19.3	NA .	20,0	ND :	15.1	16.6	20.0	96.4	NA .	70.0	140.0	75.6	82.9	70.0	140.0	9.2	20.0
iodomethane	10.0	ND	ND	18.5	NA	20.0	ND	13.7	15.2	20.0	92.6	NA	50.0	150.0	68.7	75.9	50.0	150.0	10.0	20.0
methylene chloride	5.0	3,0	ND	19.9	NA .	20,0	4.4	19,9	21.6	20.0	99.5	NA	57.0	146.0	77.5	86.0	57,0	146.0	8.2	20.0
carbon disulfide	5.0	ND	ND	21.3	NA	20.0	ND	15.1	16.1	20.0	106.3	NA.	69.0	125.0	75.5	80.3	69.0	125.0	6.2	20.0
acrylonitrile	100.0	ND	ND	NA :	NA .	20.0	ND.	NA ·	NA 1	· 20.0	NA	NA ·	NA	NA	NA	NA	NA	NA	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ND	16.3	17.0	20.0	109.2	NA	75.0	141.0	81.5	85.1	75.0	141.0	4.3	20.0
vinyi acetate	10.0	ND	ND	21,2	NA .	20.0	ND.	0.0	ි ල.0 🎨	20.0	106.2	NA	\\D\\\	132.0	0.0	0.0	D	132.0	0.0	20,0
1.1-dichloroethane	5.0	ND	ND	21.1	NA	20.0	ND	16.6	17.3	20,0	105.3	NA	79.0	125.0	82.8	86.7	79.0	125.0	4.7	20.0
2-butanone	100.0	ND	ND	19,1	NA :	20.0	ND	15.1	15.8	20.0	95.7	NA:	28.0	173.0	75.5	78,9	28,0	173.0	4.3	20.0
2,2-dichloropropane	5.0	ND	ND	19.6	NA	20.0	ND	16.0	17.7	20.0	98.2	NA	69.0	128.0	80.1	88.3	69.0	128.0	9.7	20.0
cis-1,2-dichloroethene	5.0	ND	ND (20.1	NA .	20.0	. ND	14.6	14.7	20.0	100.5	NA :	75.0	125.0	73.1	73.6	75.0	125.0	0.7	20.0
chloroform	5.0	ND	ND	21.2	NA	20.0	ND	16.8	16.9	20.0	106.0	NA	78.0	124.0	83.8	84.4	78.0	124.0	0.8	20.0

RDL= Reporting Detection Limit

ND= No! Detected NA= Not Applicable

BLK= Method Blank

BLK2# Second Method Blank

LCS= Laboratory Control Sample

LCS2⁻ Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD≈ Matrix Spike / Matrix Spike Ouplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

8260SL

Method: 8260A

Run Date: 11/10/98 Instrument ID: HPMS 6

LCS2 FLNM: NA SMPL Num: 11-132-01

LCS DF: SMPL DF:

Matrix: Soil Units: ug/kg

BLK FLNM: 6BK11340 BLK2 FLNM:

SMPL FLNM: 6BR11342 MS FLNM: 6BR11343.D

MS DF: MSD DF: 1

LCS FLNM: 6QC11341.D MSD FLNM: 6BR11344.D

		 				ONCENTRA		28						PERCE	NT REC	COVERY			DEPC	ENT RP
	ROL	BLK	BLK2			LCS Spik				MS Spike			LCS	LCS			MS	MS	MS	RPC
Target Analytes	ug/kg	ug/kg		LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCI
bromochloromethane	5.0	ND	ug/kg ND	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	%
1,1,1-trichlorgethane	5.0	ND	ND O	20.6	NA	20.0	ND	16.2	15.8	20.0	103.1	NA	78.0	125.0	81.2	78.8	78,0	125.0	3.1	20.0
1,1-dichloropropene	5.0	ND	600 2000	20.4	NA .	20.0	ND	15.7	17 .1 . Ş	20.0	101.8	. NA	77.0	124.0	78.4	85.3	77.0	124.0	8.4	20.0
carbon tetrachloride	5.0	ND	ND	20.0	NA ****	20.0	ND	12.9	13.5	20.0	99.9	NA	85.0	132.0	64.5	67.5	85.0	132.0	4.5	20.0
1,2-dichloroethane	5.0	10 W S 20 M M	ND	20.8	NA .	20.0	ND	15.1	16.2	20.0	104.1	NA.	77.0	126.0	75.4	80.8	77.0	126.0	7.0	20.0
benzena	656500000000000000000000000000000000000	ND	ND	20.7	NA	20.0	ND	16.2	15.5	20.0	103.7	NA	75.0	126.0	80.9	**************************************	75.0	126.0	4.3	20.0
trichtoroethene	5.0	ND	ND	21,3	NA.	20.0	1.2.	17.4	18.4	20.0	106.3	NA .	81.0	122.0	81.0	86.0	81.0	122.0	5.8	20,0
1,2-dichloropropane	5.0	ND	ND	19.7	NA	20.0	ND	12.4	12.5	20.0	98.6	NA	81.0	123.0	61.9	62.6	81.0	123.0	1.1	
bromodichloromethane	5.0	ND	ND %	19,8	NA 🦠	20.0	ND	15.2	15.3	20,0	99.0	NA	79.0	125.0	76.0	76.6	79.0	125.0	0.7	20.0 20.0
dibromomethane	5.0	ND	ND	21.5	, NA	20.0	ND	15.3	14.5	20.0	107.4	NA	81.0	123.0	76.7	72.5	81.0	123.0	5.6	
2-chloroethylvinyl-ether	5,0	ND	ND	20.6	NA :	20.0	ND .	14.8	13.5	20.0	103.D	NA :	80.0		73.9	67.6	80.0	126.0	3333 5 1 - PAGE	20.0
4-methyl-2-pentanona	5.0	ND N	, ND	25.8	, NA	20.0	ND	28.1	24.6	20.0	128.9	NA	50.0	151.0	140.7	123.0	50.0	151.0	9.0	20.0
	10.0	ND .	ND	16,4	NA	20.0	ND .	12.2	11.3	20,0	82.1	NA	38.0	162.0	60.8	56.7	38.0	162.0	13.4	20.0
is-1,3-dichloropropene	5.0	ND	ND	20.7	NA	20.0	ND	12.7	10.6	20.0	103.3	NA	81.0	124.0	63.5	53.0	81.0	124.0	7.0	20,0
**********************************	5,0	ND	ND	22.5	NA .	20.0	1.8	17.9	17.0	20.0	112.3	NA S	0.08	124.0	80.7	∞.∪ 76.3	80.0	0.15.52	18.0	20.0
ans-1,3-dichloropropene	5.0	ND	ND	20.7	NA	20.0	ND	13.1	9.8	20.0	103.7	NA	80.0	122.0	65.7	49.2	MORTO BOOK	124.0	5.0	20.0
1,1,2-trichloroethane	5.0	ND	ND	22,6	NA.	20.0	. ND	17.2	14.5	20.0	113.1	NA .	79.0	123.0	85.9	72.5	80.0	122.0	28.8	20.0
2-hexanone	10.0	ND	ND	16.1	NA	20.0	ND	10.9	7.0	20.0	80.6	NA	31.0	, 5 41 Sec. 550.	0.0000000000000000000000000000000000000	250000000000000000000000000000000000000	79.0	123.0	16.9	20.0
1,3-dichloropropene	5.0	ND	ND	21.5	NA	20.0	ND.	15.6	13.5	1977	-,	gila riyyan	e a sympy	149.0	54.4	35.1	31.0	149.0	43.3	20.0
tetrachloroethene	5.0	ND	ND	21.0	NA	20.0	1 6 3 3 4 5 5	1114 F. E.		20.0	107.4	NA 💛	79.0	123,0	78.1	67.4	79.0	123.0	14.7	20,0
ibromochloromethane	5.0	ND	ord Darge	90 PO PATRI 1990 P	9000 (000000000	own a common of	ND Jásob sa	12.9	12.2	20.0	105.0	NA MA	0.08	122.0	64.6	60.9	80.0	122.0	6.0	20.0
es and Definitions:		THU SE	ND	21.6	NA	20.0	ND	15.0	12.4	20.0	108.2	NA	81.0	122.0	74.9	61.8	81.0	122.0	19.2	20.0

RDL≖ Reporting Detection Limit

ND= Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

Run Date: 11/10/98

M98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A Matrix: Soil Instrument ID: HPMS_6

SMPL Num: 11-132-01

SMPL DF:

Matrix: Soil Units: ug/kg BLK FLNM: 6BK11:340 BLK2 FLNM: NA SMPL FLNM; 6BR11342

MS DF:

MS FLNM: 68R11343,D

MSD DF: 1

LCS FLNM: 6QC11341.D MSD FLNM: 6BR11344.D

					cc	NCENTRA	ATION, P	PB						PERCE	NT REC	COVERY			PERC	ENT RP
						LCS Spike	9			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	 %		%		%	<u>%</u>	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.8	NA NA	20.0	ND	14.3	11.4	20.0	104.2	NA.	79.0	125.0	71.4	56.8	79.0	125.0	22.8	20.0
chlorobenzene	5.0	0.2	ND	21.4	S NA	20.0	0.2	11.9	9.2	20.0	107.1	NA	82.0	124.0	58.6	44.8	82.D	124.0	26.1	20.0
1,1,1,2-letrachloroethane	5.0	ND	ND	21.9	NA	20.0	ND	15.3	13.8	20.0	109.4	NA.	80.0	124.0	76.7	68.9	80.0	124.0	10.8	20.0
ethylbenzena	5.0	ND	ND	21.9	NA	20.0	0.4	13.9	12.4	20.0	109.4	NA	78.0	127.0	67.6	59.7	78.0	127.0	12.1	20.0
m+p-xylene	5.0	ND	ND	44.4	NA	40.0	0.7	26.6	23.0	40.0	111.1	NA.	81.0	124.0	64.7	55.6	81.0	124.0	14.6	20.0
0-xylena	5.0	ND	ND	21.6	NA	20.0	0.3	13.5	11.2	20.0	108.0	NA.	83,0	124.0	66.0	54.6	83.0	124.0	18.5	20.0
styren e	5.0	ND	ND	22,7	NA	20.0	ND	10.6	7.0	20.0	113.4	NA	80.0	122.0	53.2	35.1	80.0	122.0	41.1	20.0
bromoform	5,0	ND	ND	20.7	NA (20.0	ND	11.3	8.7		103.4	NA .	67.0	134.0	56.5	43.5	67.0	134.0	26.0	20.0
isopropyibenzene	5.0	ND	ND	21.7	NA	20.0	ND	11.4	10.0	20.0	108.6	NA	82.0	124.0	57.0	50.2	82.0	124.0	12.7	20.0
1,1,2,2-letrachloroethane	5.0	ND	ND	22.1	NA	20.0	ND	16.6	12.5	20.0	110.3	NA	71.0	136.0	83.2	50.2 62.7	71.0	136.0	28.0	20.0
1,2,3-trichloropropane	5.0	ND	ND	22.0	NA	20.0	ND	18.2	13.8	20.0	109.8	NA NA	70.0	139.0	91.0	69.0	70.0	139.0	104840-07300007	
uns-1,4-dichloro-2-butene	5.0	ND	ND	NA	NA .	20.0	ND	NA	S NA	20.0	NA	NA	NA	NA	NA.	NA	NA	NA	27.5 NA	20.0
propyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	13.2	1D.1	20.0	103.B	NA	ਾਲਾ 79.0	124.0	65.8	50.4	79.0	1800000000000001	pressonantiano	NA
bromobenzene	5.0	ND	ND	20.0	NA *	20.0	ND	11.4	7.1	20.0	100.1	NA S	80.0	122.0	56.8	895 W W 301 500	(30000000000000000000000000000000000000	124.0	26.5	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	21.3	NA	20.0	0.1	13.5	10.2	20.0	106.4	NA NA	82.0	123.0	66.7	35.7 50.2	80.0	122.0	45.5	20.0
2-chlorololuene	5.0	ND	ND	21.7	NA ·	20.0	ND	12.3	8.7	20.0	108.3	NA	77.0	126.0	80 - W - W	0303000	82.0	123.0	27.9	20.0
4-chlorotoluene	5.0	ND	ND	21.7	NA	20.0	ND	11.4	7.1	20.0	108.3	NA NA	80.0	124.0	61.4	43,4	77.0	126.0	34.4	20.0
tert-bulyl-benzene	5.0	ND	ND	19.5	NA .	20.0	ND	12.4	10.4	20.0	97.6	NA	vojem pravog	988 178 W - 188	56.8	35.4	80.0	124.0	46.5	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.9	NA	20.0	Service Company	14	•			113 11 2/11/	78.0	122,0	62.0	51.9	78.0	122.0	17.7	20.0
sec-butyl-benzene	5.0°	38010-090	ND	grada a	er i		0.4	13.1	9.6	20.0	104.6	NA	83.0	123.0	63.6	46.0	83.0	123.0	31.0	20.0
Sec-Dutyl-Denzene	∷ 2.U ∵	ND	NO	20.5	· NA	20.0	ND	11.6	9.2	20.0	102.4	NA	80.0	124.0	57.9	46.2	80.0	124.0	22.4	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND≈ Not Detected

BLK= Method Blank

NA= Not Applicable

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL≈ Upper Control Limit

RPD= Relative Percent Difference

8260SL

Run Date: 11/10/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A Matrix: Soil Instrument ID: HPMS_6

SMPL Num: 1.1-132-01

SMPL DF:

Hoite:

BLK FLNM: 68K11340

SMPL FLNM: 6BR11342

MS DF:

Units: ug/kg

BLK2 FLNM: NA

MS FLNM: 6BR11343.D

MSD DF:

LCS FLNM: 6QC11341.D MSD FLNM: 6BR11344.D

		<u> </u>			CC	NCENTRA	TION, PP	8			<u>L</u>			PERCE	NT REC	OVERY			PERCE	ENT RP
						LCS Spike	,			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL.	BLK	BLK2	LCS	LCS2	Level	SMPL	MŞ	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/kp	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%	%	%	%	%	%	%	%	%	
p-isopropyl-toluene	5.0	ND	ND	19.7	NA NA	20,0	ND	11.3	8.7	20.0	98.6	NA.	77.0	124.0	56.5	43.5	77.0	124.0	25.9	20.0
1,3-dichlorobenzene	5.0	ND	ND	21.0	NA .	20.0	מא	9.3	5.4	20.0	105.0	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	82.0	120.0	46.3	26.8	82.0	opposite and a	25.02.028	eggen i kom
1,4-dichlorobenzene	5.0	0.2	ND	20.5	NA	20.0	ND	8.9	4.9	20.0	102.7	ା"ଅନ୍ତର NA	81.0	121.0	44.6	24.6	81.0	120.0 121.0	53.5	20.0
n-butyl-benzene	5.0	ND	ND	20.5	NA	20.0	ND	MARIN DOW	7.0	20.0	102.3	NA	81.0	125.0	51.4	898 - 9758A	90 20 20	Medicident ward	57.9	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.7	NA	20.0	ND	8.9	5.0	20.0	103.3	NA	84.0	122.0	285,85,119	35,1	81.0	125.0	37.8	20.0
2-dibromo-3-chloropropane	5.0	ND	ND	18.6	NA	20.0	ND.	11.3	ा _{7.7} ः	20.0	93.0	NA ®	83 11199	gygerer british	44.7 *******	24.9	84,0	122.0	57.0	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	18.6	NA NA	20.0	ND	4.6	2.2	20.0			55.0	%155.0 <i>%</i>	56.5	38,6	55.0	1000100040000	37.6	20.0
hexachiorobuladiene	5.0	ND	ND		NA .	20.0	ND	8.2	5.4		93.2	NA	78.0	124.0	22.9	10.9	78.0	124.0	71.2	20.0
napihalene	10.0	ND	ND	18.5	NA NA	20.0	1.72	e.∡ 5.5		20.0	92.8	NA :	73.0	127.0	41.2	27.0	73.0	127.0	41.6	20.0
2,3-trichlorobenzene	5.0	ND	ND	19.0	NA NA				3,3	20.0	92.4	NA :		152.0	18.7	7.8	56.0	152.0	49.9	20.0
	<u> </u>		110	19.0	NA	20.0	ND	4.4	2.2	20.0	94.8	NA	76.0	128.0	21.9	10.9	76.0	128.0	67.3	20.0

BLK2= Second Method Blank

LCS= Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL= Sample Results

MS/MSD= Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD= Relative Percent Difference

ND= Not Detected

NA= Not Applicable

RDL= Reporting Detection Limit

BLK= Method Blank

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49239

9239 Run Date: 11/11/98

LCS2 FLNM: NA

LCS DF:

Method: 8260A

Instrument ID: HPMS_9

SMPL Num: 11-119-05

SMPL DF: 1

Matrix: Wate

Water BLK FLNM: 9BK00234 ug/L BLK2 FLNM: NA

SMPL FLNM: 9VR00239

MS DF:

Units: ug/L

NA

MS FLNM: 9VR00240

MSD DF:

LCS FLNM: 9QC00235

MSD FLNM: 9VR00241

IVI

			-		C	ONCENTRA	TION, PPB							PERC	ENT RECO	OVERY		<u></u> _	PERCE	NT RPD
						LCS Spike	<u> </u>		•	MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD_	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	96	%	%	96
dichlorodifluoromethane	10.0	ND	ND	15.5	NA	20.0	ND	16.5	18,5	20,0	77.5	NA	38.0	148.0	82,5	92,5	60.0	140.0	11,4	20,0
chloromethane	10.0	ND	ND	16.0	NA	20.0	ND	16.3	17.2	20.0	80.0	NA	56.0	132.0	81.5	86.0	D	273.0	5.4	20.0
vinyi chloride	10.0	ND	ND	16.3	NA	20.0	ND	19,1	20.2	20.0	81.5	NA	68.0	125.0	95.5	101.0	D	251.0	5.6	20,0
bromomethane	10.0	ND	ND	23.5	NA	20.0	ND	24.4	24.5	20.0	117.5	NA	55.0	138.0	122.0	122.5	D	242.0	0.4	20.0
chloroetharse	10.0	ND	ND	19.0	NA .	20.0	ND	19.3	19.0	20.0	95.0	NA .	57.0	128.0	96.5	95,0	14.0	230.0	1,6	20.0
trichlorofluoromethane	10.0	ND	ND	19.3	NA	20.0	ND	21.4	20.1	20.0	96.5	NA	70.0	127.0	107.0	100.5	17.0	181.0	6.3	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20,0	NA	NA	NA	NA	NA	NA	70.0	130,0	NA	20,0
acetone	100.0	ND	ND	21.8	NA	20.0	ND	21.3	22.6	20.0	109.0	NA	44.0	114.0	106.5	113.0	70.0	130.0	5.9	20.0
1,1-dichloroethens	5.0	ND	ND	19.9	NA	20.0	ND	21.6	20,9	20.0	99,5	NA	69.0	144.0	108.0	104,5	O.	234.0	3.3	20.0
iodomethane	NTC	ND	ND	16.2	NA	20.0	ND	17.0	17.9	20.0	81.0	NA	NA	NA	85.0	89.5	70.0	130.0	5.2	20.0
methylene chloride	5.0	ND.	ND	21.9	NA	20.0	ND	20.5	20.2	20,0	109.5	NA	71.0	128.0	102.5	101.0	D	221.0	1.5	20,0
carbon disulfide	5.0	ND	ND	18.9	NA	20.0	ND	20.2	19.5	20.0	94.5	NA	67.0	136.0	101.0	97.5	70.0	130.0	3.5	20.0
acrylonitrila	NTC	ND	ND	NA	NA	20,0	ND	NA	NA	20.0	NA	NA	NA:	NA.	NA	NA	70.0	130.0	NA	20,0
trans-1.2-dichloroethene	5.0	ND	ND	21.8	NA	20.0	ΝĐ	23.2	21.9	20.0	109.0	NA	85.0	133.0	116.0	109.5	54.0	156.0	5.8	20.0
vinyl acetate	10.0	ND	ND	20.5	NA	20.0	ND	25:3	26.2	20,0	102.5	NA	0.e	236.0	126.5	131.0	9.0	236.0	3.5	20,0
1.1-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.7	20.8	20.0	105.0	NA	82.0	124.0	108.5	104.0	59.0	155.0	4.2	20.0
2-butanone	100.0	ND	ND	21.6	NA	20.0	ND	18.9	19,2	20,0	108.0	NA	43.0	140.0	94.5	96,0	70.0	130.0	1,6	20,0
2,2-dichloropropane	5.0	ND	ND	18.9	NA	20.0	ND	20.1	19.3	20.0	94.5	NA	77.0	126.0	100.5	96.5	60.0	140.0	4.1	20.0
cis-1,2-dichloroethene	5.0	ND	ND	20.3	NA	20.0	ND	21.1	20,3	20.0	101.5	NA	69,0	130.0	105.5	101.5	60.0	140.0	3.9	20,0
chloroform	5.0	ND	ND	21.3	NA	20.0	1.7	22.7	22.4	20.0	106.5	NA	83.0	121.0	105.0	103.5	51.0	138.0	1.3	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected
NA = Not Applicable

BLK = Method Blank

BLK2= Second Method Blank

LCS = Laboratory Control Sample

LCS2= Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

Units:

Method: 8260A

Matrix: Water

Run Date: 11/11/98

LCS2 FLNM: NA

LCS DF:

1

1

od: 8260A

ug/L

Instrument ID: HPMS_9 BLK FLNM: 9BK00234 SMPL Num: 11-119-05 SMPL FLNM: 9VR00239 SMPL DF: MS DF:

BLK2 FLNM: NA

MS FLNM: 9VR00240

MSD DF:

LCS FLNM: 90C00235

MSD FLNM: 9VR00241

		<u> </u>				ONCENTRA	TION, PPE	3					_	PERC	ENT REC	OVERY			PERCE	ENT RP
	ł				<u> </u>	LCS Spike				MS Spike			LCS	LCS			MS	MS	мѕ	R
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	U
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	•
bromochloromethane	5.0	ND	ND	22.5	NA	20.0	ND	22.1	21.7	20.0	112.5	NA	85.0	118,0	110.5	108,5	60.0	140.0	1.8	20
1,1,1-trichloroethane	5.0	NO	ND	19.9	NA	20.0	ND	21,3	20,5	20.0	99,5	NA:	74.0	125,0	106.5	102,5	52,0	162.0	3.8	20
1,1-dichloropropana	5.0	ND	ND	20.9	NA	20.0	ND	22.8	22.2	20.0	104.5	NA	85.0	126.0	114.0	111.0	60.0	140.0	2.7	20
carbon tetrachloride	5.0	ND	ND	20.1	NA	20.0	ND	22.0	21.2	20.0	100.5	NA	73.0	129.0	110.0	106.0	70.0	140.0	3.7	21
1,2-dichloroethane	5.0	ND	ND	21.0	NA	20.0	ND	21.6	21.3	20,0	105.0	NA	76.0	123.0	108,0	106.5	49.0	155.0	1,4	2000-000 20
benzene	5.0	ND	ND	20.5	NA	20.0	QN	20.7	20,4	20.0	102.5	NA	86.0	118,0	103.5	102.0	37.0	151.0	1.5	20
trichloroethene	5.0	ND	ND	20.8	NA	20.0	12.1	32.0	31.8	20.0	104.0	NA	82.0	120.0	99.!5	98,5	71.0	157.0	0.6	20000000000000000000000000000000000000
1,2-dichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	20.5	20.5	20.0	103,0	NA	74.0	126.0	102.5	102.5	D	210.0	0.0	2
bromodichloromethane	5.0	ND	ND	21.7	NA	20.0	ND	22.3	21.7	20.0	108.5	NA	74.0	126.0	111.5	108.5	35.0	155.0	2.7	20000000000000000000000000000000000000
dibromomethane	5.0	ND.	ND	21.3	NA	20.0	ND	21.0	21.9	20.0	106.5	NA	78.0	125.0	105.0	109.5	60.0	140.0	4.2	2
?-chloroethylvinyl-ether	10.0	NO	ND	17.1	NA	20.0	ND	ND	ND	20.0	85.5	NA	50.0	151.0	NA	NA	70.0	130.0	ND	
4-methy⊩2-pentanone	10,0	ND	ND	18.9	NA	20.0	ND	18.7	19.5	20.0	94.5	NA	79.0	127.0	93.5	97.5	70.0	130.0	4.2	20
sis-1,3-dichloropropene	5.0	ND	ND	21.7	NA	20.0	ND	21.9	21.7	20.0	108.5	NA	77.0	123.0	109.5	108.5	D	227.0	0,9	200000000 20
toluene	5,0		ND:	20.5	NA	20.0	ND	20,7	20.4	20.0	102.5	NA	83.0	119.0	103.5	102.0	47.0	150.0	1.5	20
ns-1,3-dichloropropene	5.0	ND	ND	18.9	NA	20.0	ND	18.9	18.7	20.0	94.5	NA	74.0	124.0	94.5	93.5	17.0	183.0	1.1	20
1,1,2-trichlomethane	5,0	NO	ND	20.2	NA	20.0	DN	19.7	20.0	20.0	101.0	NA	72.0	119.0	98.5	100.0	52.0	150.0	1.5	20
2-hexanone	10.0	ND	ND	18.7	NA	20.0	ND	18.7	19.8	20.0	93.5	NA	55.0	114.0	93.5	99.0	70.0	130.0	5.7	20 20
1,3-dichioropropane	5.0	Ι¥D	ND	20.6	NA	20,0	ND	20.0	20.2	20.0	103.0	NA	73.0	8000000000000000	95000000000000000	POPOS (2014) (2014) (2014)	888.869 ROSES	100100000000000000000000000000000000000	33338943994948	a tasasasasa
tetrachloroethene	5,0	999900000099900	200000000000000000000000000000000000000	000000000000000000000000000000000000000	808000400000000000000000000000000000000	organica de proposit		200000000000000000000000000000000000000		\$			950000000000000000000000000000000000000	122.0	100.0	101.0	60.0	140.0	1,0	20
libromochloromethane	5.0 5.0	ND ND	ND ND	19.8 18.8	NA NA	20.0	ND	20.9	20.5	20,0	99.0	NA	82.0	120.0	104.5	102,5	64.0	148.0	1.9	2 (

Notes and Definitions:

RDL= Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49239

Matrix:

Method: 8260A

Run Date: 11/11/98 Instrument ID: HPMS_9

LCS2 FLNM:

NA

LCS DF: SMPL DF:

SMPL Num: 11-119-05

SMPL FLNM: 9VR00239

MS DF:

Units:

Water ug/L

BLK FLNM: 9BK00234 **BLK2 FLNM:**

NA

MS FLNM: 9VR00240

MSD DF:

LCS FLNM: 9QC00235

MSD FLNM: 9VR00241

					C	ONCENTRA	TION, PPB							PERCE	NT RECO	OVERY			PERCE	NT RPD
						LCS Spike	.	-		MS Spike			LCS	LCS			MS	. MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L_	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	- %	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.8	NA	20.0	ND	20.8	21.0	20.0	104.0	NA	75.0	121.0	104.0	105.0	60.0	140.0	1.0	20.0
chlorobenzene	5,0	ND	ND	20.4	NA	20.0	ND	20,5	20.6	20.0	102.0	NA	83.0	120.0	102.5	103.0	37,0	160.0	0.5	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.1	NA	20.0	В	20.5	20.5	20.0	100.5	NA	79.0	118.0	102.5	102.5	60.0	140.0	0.0	20.0
othylbenzene	5.0	ND	ND	19,4	NA	20.0	ND	21.0	20.3	20.0	97.0	NA .	82,0	119.0	105.0	101.5	37.0	162.0	3,4	20.0
m + p-xylene	5.0	ND	ND	39.7	NA	40.0	ND	41.7	40.6	40.0	99,3	NA	81.0	121.0	104.3	101.5	60.0	140.0	2.7	20.0
o-xylene	5.0	ND	ND	20.4	NA	20.0	ND	21.1	20.6	20,0	102.0	NA	81.0	198.0	105.5	103,0	60,0	140.0	2.4	20.0
styrene	5.0	ND	ND	21.2	NA	20.0	ND	21.3	21.2	20,0	106.0	NA	81.0	118.0	106.5	106.0	60.0	140.0	0.5	20.0
bromoform	5.0	ND	ND	17.5	NA	20,0	ND	17.3	17.2	20.0	87.5	NA	68,0	129.0	86.5	86.0	45.0	169.0	0.6	20,0
isopropylbenzene	5.0	ND	ND	20.1	NA	20.0	ND	21.3	20.8	20.0	100.5	NA	81.0	121.0	106.5	104.0	60.0	140.0	2.4	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	20.4	NA .	20.0	ND	21.0	21,5	20,0	102,0	NA	61.0	137,0	105.0	107.5	46,0	157.0	2.4	20.0
1,2,3-trichloropropane	5.0	ND	ND	20.6	NA	20.0	ND	21.0	21.9	20.0	103.0	NA	72.0	130.0	105.0	109.5	60.0	140.0	4.2	20.0
trans-1;4-dichloro-2-butane	NTC	ND	ND	NA	NA	20,0	ND	NA	NA .	20.0	NA	NA	NA	ŊA	NA	NA	NA	NA	NA	20,0
propyl-benzene	5.0	ND	ND	19.5	NA	20.0	ND	20.7	20.4	20.0	97.5	NA	69.0	135.0	103.5	102.0	60.0	140.0	1.5	20.0
bromobenzene	5.0	ND.	ND	20.8	NA	20.0	ND	21,0	20.8	20.0	104,0	NA	86.0	118,0	105.0	104,0	60.0	140.0	1.0	20.0
1,3,5-trimethylbenzene	5,0	ND	ND	20.3	NA	20.0	ND	21.0	20.6	20.0	101.5	NA	83.0	121.0	105.0	103.0	60.0	140.0	1.9	20.0
2-chlorotoluene	5:0	ND	ND	18,5	NA	20,0	ND	21.6	19,1	20.0	92.5	NA	80,0	126.0	108,0	95.5	60.0	140.0	12.3	20.0
4-chlorotoluene	5.0	ND	ND	21.7	NA	20.0	ND	19.6	21.6	20.0	108.5	NA	80.0	125.0	98.0	108,0	60.0	140.0	9.7	20.0
tert-butyl-benzene	5.0	NO	ND	20.0	NA	20.0	ND	21.1	18.7	20.0	100.0	NA	79.0	114.0	105.5	93,5	60,0	140.0	12.1	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	20.3	NA	20.0	ND	21.1	20.8	20.0	101.5	NA	84.0	121.0	105.5	104.0	60.0	140.0	1.4	20.0
sec-butyl-benzene	5.0	ND	ND	18.2	NA	20.0	ND	20.6	20.1	20.0	96.0	NA	81.0	122.0	103.0	100,5	60.0	140,0	2.5	20:0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative cent Difference 8260





Run Date: 11/11/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Instrument ID: HPMS 9

SMPL Num: 11-119-05

SMPL DF:

Matrix:

Water

Units:

BLK FLNM: 9BK00234

SMPL FLNM: 9VR00239

MS DF:

ug/L

BLK2 FLNM:

MS FLNM: 9VR00240

MSD DF:

LCS FLNM: 90:C00235

MSD FLNM: 9VR00241

														****			_			
	4					CONCENTRA	TION, PPE	<u> </u>						PERC	ENT REC	OVERY			PERCE	NT RPD
		j				LCS Spike	İ			MS Spike			LCS	LCS	. <u>-</u>		MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	96 ,	%	%	%	%	%	96	%
p-isopropyl-toluene	5.0	ND	ND	19.1	NA	20.0	ND	20.1	20.1	20.0	95.5	NA	80,0	119.0	100.5	100.5	60.0	140.0	0.0	20.0
1,3-dichlorobenzene	5.0	ND	ND	20.0	NA	20.0	ND	20.4	20.4	20.0	100.0	NA	85.0	119.0	102.0	102.0	60.0	140.0	0.0	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.8	NA	20.0	ND	20.5	20.4	20.Q	99.0	NA	82.0	122.0	102.5	102.0	18.0	190.0	0.5	20,0
n-butyl-benzene	5.0	ND	ND	19.4	NA	20.0	ND	20.6	20.4	20.0	97.0	NA	80.0	125.0	103.0	000000000000000	60.0	140.0	1.0	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.6	NA	20.0	ND	21.4	21.4	20.0	103.0	NA	86.0	119.0	107.0	107.0	19.0	190.0	0.0	20.0
1, 2-dibromo-3-chloropropane	5.0	ND	ND	18.8	NA	20.0	ND	18.0	19.3	20.0	94.0	NA	66.0	134.0	90.0	96.5	60.0	140.0	7.0	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	20,5	NA	20.0	ND	21.1	21.1	20.0	102.5	NA	78.0	122.0	105.5	105.5	60.0	140.0	0.0	000000000000000000000000000000000000000
hexachiorobutadiene	5.0	ND	ND	19.0	NA	20.0	ND	20.3	19.8	20.0	95.0	NA NA	73.0	125.0	83888899888	(1)4887973688886	60.0	555550000000000000000000000000000000000	Gene gent greek	20.0
napthalene	10.0	ND	ND	21.6	NA	20.0	ND	21.1	21.9	20.0	09846846666666	NA	000000000000000000000000000000000000000	904499044000000	101.5	99,0		140.0	2.5	20.0
1,2,3-trichlorobenzene	5.0	000000000000	ND	2002/2002/2002/200	20060000100010001000		5000000 PG 1560490	20437933313130303		68,803000000000000	108.0	082/28/28/6	74.0	148.0	105.5	109.5	60.0	140.0	3.7	20.0
1,2,3-trioliidiobenzene	5,0	ND	SANDS:	20.3	NA	20.0	ND.	21.1	21.9	20.0	101.5	NA	74.0	124.0	105.5	109.5	60.0	140.0	3.7	20.0

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

ANAL WORK GRP: WG49168

EXT DATE: 11/9/98

RUN DATE: 11/10/98

METHOD: M625 MATRIX: WATER BENCH SHEET: V104P79 BLK FLNM: 14983.D SMPL ID : 11-058-01 SMPL FLNM : 14997.D

CONCENTRATION UNITS: UGA.
PREP WORK GRP: WG49030

LCS FLNM; 14984.D

MS FLNM: 14998.D MSD FLNM: 14999.D INSTRUMENT: HPMS3
ANALYST: mdc

				CONCE	NTRATION , ug	/L					PERCEN	IT RECOVE	RY , %				PERCENT	1		BEYO! LIMIT	
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SP	IS IKE DED MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MS LCL MS UCI	OUP RPD	MSD RPD	RPD UCL	SAMPLE	S	MS MS
PYRIDINE	5.0	ND	100	35.1	ND 2	00 52.3	59.8	NA.	35,1	5	150	NA.	26.1	29.9	5 150	NA	13	40			
I-NITROSODIMETHYLAMINE	5.0	NO	100	48.7	NO 2	XV 83.6	85.8	NA .	48.7	5	150	NA .	41,8	42.8	5 150	NA.	2	40			
WILINE	10.0	NĐ	100	60.1	and a contract of the contract	0.0	0.0	NA	60.1	5	150	NA.	0.0	0.0	5 150	NA	#DIV/OI	40		1	الما
HENOL	5.0	ND	100	31.1	ND 2	10 55.7	59.8	NA .	31.1	5	112	NA	27.8	29.9	5 112	NA	7	40			
IIS(2-CHLOROETHYL)ETHER	5.0	ND	100	70.5	ND 21	00 131.	144.0	NA	70.5	12	158	NA	65.8	72.0	12 158	NA.	9	40			landa
-CHLOROPHENOL	5.0	ND	100	63.7	NO 2	123	134.4	NA.	69.7	23	134	NA	62.0	67.2	23 134	NA	8	40			
,3-DICHLOROBENZENE	5.0	ND	100	50.1	ND 2	00 109.4	116.8	NA .	50.1	5	172	NA .	54.7	58.4	5 172	NA.	7	40			land.
4-DICHLOROBENZENE	10.0	ND	100	50.1	ND 2	10 111.	1 116.5	NA .	50.1	20	124	NA	55.9	58.3	20 124	NA.	4	40			
ENZYL ALCOHOL	5.0	ND	100	66.6	ND 2	00 124.0	125.5	NA	66.6	5	150	NA	62.3	62.7	5 150	NA .		40	02000 000	2.00000000	00000
,2-DICHLOROBENZENE	5.0	ND	100	62.9	ND 2	10 114.	123.4	NA .	52.9	32	129	NA	57.1	61,7	32 129	NA	8	40			
-METHYLPHENOL	5.0	ND	100	64.1	ND 2	00 107.0	114.1	NA	64.1	5	150	NA	53.8	57.0	5 150	NA	6	40	-00000 And	25 1500001	00000
IS(Z-CHLOROISOPROPYL)ETH	5.0	ND	100	84.0	ND 2	XX 171.	181.7	NA .	84 0	36	168	NA .	85.9	90.8	36 166	NA.	- 8	40		1	
- & 4-METHYLPHENOL	5.0	ND	100	59.2	ND 20	XO 98.7	103.5	NA	59.2	5	150	NA	49.4	51.7	5 150	NA	5	40		45 5500	
INTROSO-DIN PROPYLAMINE	5.0	ND	100	67.5	ND 2	140.6	145.5	NA .	67.5	5	230	NA .	70.3	72.8	5 230	NA:	3	40			
EXACHLOROETHANE	5.0	ND	100	53.4	ND 2	00 113.0	125.8	NA	53.4	40	113	NA	56.9	62.9	40 113	NA.	10	40			
ITROBENZENE	5.0	ND	100	65.2	ND 2	XI 143.	156.3	NA .	65.2	35	180	NA .	71.7	78	35 180	NA.	9	40		180	
SOPHORONE	5.0	ND	100	76.9	ND 2	00 159.0	164.5	NA.	76.9	21	196	NA.	79.5	82.3	21 196	NA.	3	40	2000		laada
-NITROPHENOL	5.0	ND	100	64.6	ND 2	138.1	145.2	NA .	64.6	29	182	NA	69.4	72.6	29 182	NA.		40			
4-DIMETHYLPHENOL	5.0	ND	100	72.6	ND 2	00 32.6	35.8	NA	72.6	32	119	NA	16.3	17.9	32 119	NA.	10	40	2222		
IIS(Z-CHLOROETHOXY)METHAN	25.0	ND	100	69.7	ND 2	10 141.	150.4	NA .	69.7	23	184	NA .	70.7	75.2	33 184	NA.	8	40			
SENZOIC ACID	5.0	ND	100	9.1	ND 2	00 44.7	60,3	NA	9.1	5	150	NA NA	22.4	30.1	5 150	NA .	30	40		7.55T-7.0000	00000000
4-DICHLOROPHENOL	5,0	NO	100	65.5	ND 2	135.0	147.4	NA .	65.5	39	135	NA	67,5	73.7	39 135	NA.	₩	40	W. S		
,2,4-TRICHLOROBENZENE	5.0	ND	100	54.2	ND 2	00 117.0	126.9	NA	54.2	44	142	NA NA	58.9	63.5	44 142	NA.	7	40	Annahance	an 60000	000000000
IAPHTHALENE	5.0	NO	100	59.1	ND 2	10 126.	134.3	NA .	59.1	21	133	NA	63.2	67.1	21 133	NA.		40			
-CHLOROANILINE	5.0	ND	100	63,3	ND 2	00 10.1	3.4	NA	63.3	5	150	NA.	5.1	1,7	5 150	NA	100	40	200000000		h
IEXACHLORGBUTADIENE	10.0	ND .	100	52.2	ND 2	D 117,	128,5	NA.	52.2	24	116	NA	58.8	64.3	24 116	NA.	9	40			property of the second
-CHLORO-3-METHYLPHENOL	5.0	ND	100	78.5	ND 2	00 152,0	164.7	NA	78.5	22	147	NA.	76.0	82.4	22 147	NA.		40	000000000	00000000	
-METHYLNAPHTHALENE	5.0	ND	100	62.2	ND 2	132.	135.5	NA .	62.2	5	150	NA .	66.0	67.8	5 150	NA	3	40			
IEXACHLOROCYCLOPENTADIE	5.0	ND	100	51.7	ND 2	00 84.6	93.8	NA.	51.7	5	150	NA NA	42.3	46.9	5 150	NA.	10	40	300304000	00000000	000002-200
A,6-TRICHLOROPHENOL	25.0	ND.	100	72.2	ND 2	0 152.	162.7	NA.	72.2	37	144	NA	76.1	81.4	37 144	NA.	7	4 0			/##\
4.5-TRICHLOROPHENOL	5.0	ND	100	78.8	ND 2	00 164.0	176.3	NA	78.8	5	150	NA .	82.0	88.2	5 150	NA.	7	40	450504000	*******	20000000
CHLORONAPHTHALENE	25.0	ND	100	66.8	ND 2	XX 141.	149.2	NA.	68.8	60	118	NA	70.6	74.6	60 118	NA.	5	40			
-NITROANILINE	5.0	ND	100	69.9	day bir bir bir bir bir bir bir bir bir bir	XO 6.9	2.8	NA	69.9	5	150	NA.	3,5	1.4	5 150	NA	84	40	8000014000	0000000	
METHYLPHTHALATE	5.0	ND	100	83.3	annon dan baran mengani kerangan ber	164	PROGRAMMATICAL TOPS	NA .	89.3	5	112	NA.	82.2	88	5 112	NA	- 6	40			/***
CENAPHTHYLENE	5.0	ND	100	72.2	bergedeldeldingsbider versioner	00 146.4	alidicitate a constitutiva e de el	NA	72.2	33	145	NA	73.2	76.1	33 145	NA	4	40			le constru
6-DINITROTOLUENE	5.0	ND	100	83.D	100000000000000000000000000000000000000	00 162.	16866666666666666	NA .	83.0	50	158	NA .	81,4	87,3	50 158	NA	7	40			
-NITROANILINE	25.0	ND	100	71.1	and the control of the state of	XX 6.8	2.4	NA NA	71.1	5	150	NA.	3.4	1.2	5 150	NA.	95	40			L
CENAPHTHENE	5.0	ND	100	71.0	aaaaadda aanaaaaaa	30 144.	anaganat salaman	NA	71.0	47	145	NA .	72.1	75.2	47 145	NA	4	40			
4-DINITROPHENOL	25.0	ND	100	75.5	la final tradition in a some parameter for all one and	DG 136.		NA	75.5	5	191	NA NA	68,1	79.6	5 191	NA	18	40		1	ll.
AITROPHENOL	25.0 25.0	NO.	100	728	a e con come distribuir autoritation	0 73	3.0	NA.	73.8	5	132	NA	3.7	1.5	5 132	NA	85	40			C
HITHOPHENOL HBENZOFURAN	5.0	ND	100	**** *** ** 72.7	Seath Charles and American Seath Control of the Con	00 151.	and the second second second second	NA	72.7	5	150	NA	75.8	78.2	5 150	NA	3	40			
A-DINFTROTOLUENE	5.0	ND	100	90.7	ana and a distribution and a series of the s)0 172.	anne ann an an an an an an an an an an an an		90.7	29	139	NA.	86.3	92.5	39 139	NA	7	40	100 to	400	

NOTES & DEFINITIONS :

NA = NOT APPLICABLE

NS = NOT SPIKED

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

WG49168A.XLS

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KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49168

EXT DATE: 11/9/98

RUN DATE: 11/10/98

INSTRUMENT: HPMS3

METHOD: M625 BENCH SHEET: V104P79 MATRIX: WATER

SMPL ID: 11-058-01 SMPL FLNM: 14997.D

ANALYST: mdc

CONCENTRATION UNITS: UGAL

BLK FLNM: 14983.D

MS FLNM: 14998.D

PREP WORK GRP: WG49030

LCS FLNM: 14984.D

MSD FLNM: 14999.D

	******			CONCE	NTRATION	, ug/L						PERCE	NT RECOV	ERY, %					PERCEN	ַ וּ		BEYO	
			LCS Spike			MS SPIKE		,		•		LCS		_	·			DUP	MSD	RPD	MPLE	S &	
ANALYTE	RDI,	BLANK	ADDED	LCS	SAMPLE			MSD	BLANK	LCS	LCS LCI	UCL	SAMPLE	MS	MSD	MS LCL	MS UCL	RPD	RPD	UCL	نے	<u> </u>	S.
DIETHYLPHTHALATE	5.0	ND ************************************	100	89.8	ND	200	172.3	185.8	NA	89.8	5	114	NA STATE OF THE STATE OF THE ST	86.1	92,8	5	114	NA	7	40			
FLUORENE	5.0	ND	100	77.3	NO	200	157.1	163.9	NA .	77.3	25	158	NA	78.6	81,9	25	158	NA .	4	40			
4-CHLOROPHENYL-PHENYL ETH	5.0	ND	100	73.6	ND	200	151.2	158.2	NA SSSC110019881	73.6	59	121 ******	NA 1000000 110000000	75.6	79.1	59	121	NA	5	40		*****	
-NITROANILINE	25 0	ND	100	92.5	ND	200	7.8	7.8	NA.	92,6	5	150	NA .	3.8	3,9		150	NA .		40			
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	84.3	ND	200	168.8	178,0	NA	84,3	5	150	NA	84.4	89.0	5	150	NA	5	40			1
6-DINITRO-2-METHYLPHENOL	25 0	ND	100	102.1	ND	200	185.3	202.5	NA .	102,1	5	181	NA	92.6	101.3	•	181	NA :	9	40			
N-NITROSODIPHENYLAMINE **	5.0	ND	100	90.2	ND	200	156.5	173.4	NA.	90.2	5	150	NA ************************************	78.2	87	5	150	NA	10	40	ann an		11.
-Bromophenyl-Phenyl Eth	50	ND	100	70 1	ND	200	138.2	149.0	NA	70.1	53	127	NA .	69.1	74.5	53	127	NA .		40			488
IEXACHLOROBENZENE	5.0	ND	100	81.9 ~~~~~	ND 	200	160.6	172.4	NA	81.8	5	152	NA	80.3	66.2	5	152	NA POSCY COSCOL		40	20249	vana (1000)	Jacoby
ENTACHLOROPHENOL	25 0	ND	100	72.8	ND	200	164.5	187 4	NA :	72.8	14	176	NA .	62.3	93.7		176	NA	13	40			
PHENANTHRENE	5.0	ND	100	88.0	ND	200	171.1	183.5	NA	88.0	54	120	NA	85.6	91.8	54	120	NA	7 waxaan maaaaa	40	20220-00	2000010000	a como de
WTHRACENE	5.0	ND	100	92.5	NO	200	163.3	176.1	NA .	92,5	27	133	NA .	81.7	88.1	27	133	NA .	8	40		M (33)	4
CARBAZOLE	5.0	ND	100	101.9	NO	200	186.1	205.4	NA	101.9	5	150	NA	93.0	102.7	5 ***********	150	NA	10	40	20000	9000 100-00-0	alessor les
)HH-BUTYLPHTHALATE	5.0	ND	100	92.9	ND	200	175.4	194.0	⊗NA ⊗	92.9	1	118	NA .	87.7	97.0		118	NA	10	40			
LUORANTHENE	5.0	ND	100	91.8	ND	200	177.8	194.9	NA	91.9	26	137	NA	88.9	97	26	137	NA SOURCE STATE	9	40	000000	9055 0 000	alessa lee
YRENE	5.0	ND	100	96.2	ND	200	180.0	195.0	NA 🔆	96.2	52	115	NA .	90.0	97.5	52	115	NA	8	40			
BUTYLBENZYLPHTHALATE	5.0	ND	100	102.7	ND	200	164.2	202.8	NA.	102.7	5	152	NA	92.1	101	5	152	NA	10	40	5 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	400000000	1
ENZO(A)ANTHRACENE	10.0	ND	100	98.2	ND	200	183.4	203 2	. NA	98.2	5	262	NA	91.7	101.6	5	262	NA	10	40		889 (888)	100010
,3'-DICHLOROBENZIDINE	5.0	ND	100	105.8	ND	200	0.4	0.0	NA	105.8	33	143	NA	0.2	0.0	33	143	NA	200	40	000000000000000000000000000000000000000	-000000000	
HRYSENE	5.0	ND	100	95.2	ND	200	160.7	198.0	NA.	95.2	33.17 S	168	NA .	80.4	99.0	. 17	168	NA	9	40	388		
NS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	98.9	ND	200	178.8	198.4	NA.	98.9	8	158	NA	89.4	99.2	8	158	NA 222222	10	40	55000 5 0-	escaps660:	
H-N-OCTYLPHTHALATE	5.0	ND	100	108.9	ND	200	206.6	224.9	NA .	108.9	. A.	146	NA	103.3	112.4		146	NA	8	40	333 P.S	300	
ENZO[B]FLUORANTHENE	5.0	ND	100	98.3	ND	200	193.0	208.8	NA	98.3	24	159	NA	96.5	104.4	24	159	NA	8 ************	40	10000000000000000000000000000000000000	99343 380	13535
ENZOKIFLUORANTHENE	8.0	ND	100	110.3	ND	200	211.2	221.0	NA.	110.3		162	NA .	1056	110.5	3.11	162	NA		.40			1000
enzo(alpyrene	5.0	ND	100	106.2	ND	200	185.8	201.6	NA	106.2	17	163	NA	92.9	100.8	17	163	NA	8 	40	20040-004	6054001060	
NOENO(1,2,3-CD)PYRENE	5.0	ND	1D0	104.3	ND	200	203.7	218.4	NA .	104.3	5		NA	101.9	109.2	, \$	773	NA	₹	40	333		
DIBENZIA, HJANTHRACENE	5.0	ND	100	112.2	ND	200	218.5	235,5	NA.	112.2	5	227	NA	109.2	117.7	5	227	NA	7 2000 2000 2000 200	40	00000	0000000000	3000
ienzoig,h.iiperylene	5.0	ND	100	107.4	ND	200	209.4	222.6	NA .	107.4	5	219	, NA	104.7	111.3	9	219	NA	5	40			
SURROGATES	ſ				_				_														
-FLUOROPHENOL		43.2	100	46.2	37.14	100	41.5	45.9	43.2	46.2	21	100	37.1	41.5	45.9	21	100						
HENOL-D5		30.0	100	31.2	24.0	100	29.2	31,3	30.0	31.2	10	94	24.0	29.2	31.3	10	94						
ITROBENZENE - D5	,	31.7	50	33.5	29.8	50	34.1	36.4	63.3	67.0	35	114	59,5	68.3	72.8	35	114				1		11
-FLUOROBIPHENYL		33.9	50	15,5	31.5	50	37.9	38,7	67,7	70.9	43	116	63 t	75,9	77.4	43	118						
.4,6-TRIBROMOPHENOL		76.0	100	80.6	76.3	100	80.2	88.1	76.0	80.6	10	123	76.3	80.2	88.1	10	123						
TERPHENYL - D14	*******	55.1	50	55.9	47.4	50	49.4	54.7	110.1	1118	33	441	94.8	98.6	109.5	33	141						探察院

MARIETTA, OH

QUALITY CONTROL SUMMARY / 6081 SOILS . FRONT

INSTRUMENT : HP 9

SAMPLE ID: 11-121-01

EXT'N DATE: 11/9/98

ANALYST : ECL

BLK FLNM: 1286 LCS FLNM: 1287 SMPL FLNM: 1289

EXT'N BENCH SHT: V104P73

RUN DATE: 11/10/98

MS FLNM: 1290

EXT'N WORK GRP: WG49010 ANAL WORK GRP: WG49090

MSD FLNM: 1291

	1		CONCE	OITARITI	N, ug/1	kg			% REC	COVER	Υ					PERCENT		<u> </u>
		\int			-											MS/MSD	RPD	
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS L		mpie	MS	MSD	MS LCL	MS UCL	RPD A	tvisory Limi	Sample Sample
				FILLIA		MIN	FREAL	Filia II					TIM		MA	MANAGE	PRINT	
ALPHA-BHC	1.7	ND	9.15	ND	9.60	9.47	NA	54.8	37 1	34 N	IA .	57.5	56.7	51	145	1.4	0-43	
GAMMA-BHC	1.7	ND	9.70	::ND:	100	9.60	:::NA::::	: 58.1 ∵	32 · I	27 :N	ia:	60.1:	57.5	54	134	.4:4	0-18	
BETA-BHC	1.7	ND	9.76	ND	10.0	11.3	NA .	58.4	17 1	47 N	λ !	80.1	67.7	51	129	11.8	0-28	
HEPTACHLOR	1.7	NO	10,1	ND	10,0	12.1	NA.	60,3	34 (11 1	(A	63.8	72.5	40	139	12.6	0.37	
DELTA-BHC	1.7	ND	10.1	ND	10.4	9.91	NA .	60.3	19 1	40 N	IA	62.1	59.3	56	138	4.6	0-78	
ALDRIN	1,7.	ND.∵	9.87	·· ND	10.5	12.4	: : :NÀ : : : :	59,1	42∵1	22 : · N	X	63,2	743	:-26∶	143	16.2	0-38	
HEPTACHLOR EPOXIDE	1.7	ND	10.0	ИD	10.5	11.9	NA	59.8		42 N	IA (82.9	71.2	51	135	12.3	0-40	1
GAMMA-OHCORDANE	1.7	ND∷	. NA.	ND:	NA:	NA	:::NA:::::	: NA ::				NA::::	ŅΑ		115	NA	0-40	
ALPHA-CHLORDANE	1.7	ND	ŊA	ND	NA	NA	NA	NA .	1.5.4.4.4.4	idir kada		NA.	, NA	45	115	NA	0-17	Programa
ENDOSULFAN. (iy∴	∴ND∷	0.14:	∵ ND. ∶	8.59	9.92	::::NA	48:7.				51.4;	59.4		.123	114.4	0-22	
4,4-00E	3.3	ND	10.0	ND	10.8	12.2	NA	59.9				64.6	73.1	64	152	12,4	0-23	Access:
DIELOPIN	: 3.3 ∵	∴NP∷	10.6	∵N⊅∵	111:	12,7	::::NA::::::	63.2				66.4 ∵∷	76.2	:23	B	(437	0-20	
ENDRIN	3.3	ND	10.2	ND	10.5	12.4	NA (4) (4) (4) (4) (4) (4)	60.9				62.8	74.1	56	154	16.5	0-28	
Octobro (A/PPP)	3.0	:ND:	;;19,6-;-	.∵ND.∷	(t),0;	12.8	i ina	;·63; 4 ;		H		65.9	76.6		170	(1,15,Q)(())	0.30	10.000
ENDOSULFAN II	3.3	ND	7.67	ND	8.02	10.1	NA	45.9				48.0	60.3	21	117	22.6	0-16	l aman
8,4,00℃	3.3	,NΩ.∵;	10.4	∵ ND∵	11.0	13.0	::::NA	62.2				66.O∷:	77.8		168	218.4	0-40	X (0.00000000000000000000000000000000000
ENDRIN ALDEHYDE	3.3	ND	6.26	ND	6.70	8.33	NA -1-1-1 ₂ 02-1-1-1-1	37.5				40.1	49.9 50.1	21	115 117	21.7 23.6	0.30	1000000
ENDOSLILPAN SULPATE	3.3	∴ND∷∵	6.53	⋰ND∷	6.60	. 8.38.	:::NA	.39.L				39.5(; ; ; 60.0	72.1	بانہ: 26	198	18.3	0-19	
METHOXYCHLOR	17 3.3	ND	9.56	ND ∴ GB	10.0	12.0	NA	57.3 46;3				48.9∷	60	NA:	NA	20.4		
ENDRIN KETONE	33	:ND:::	8.07	∴ ND:	8,17	100	ONA COS	∴HB(S) NA				nA NA	NA	45	115	NA	0-40	1
Tech-CHLORDANE	33	NO	NA NA	ND ND	NA NA	NA NA	NA NA	NA :		on book	- (14)(14)(1	NA : :	NA.	40.00	125	NA	0-40	
TQXAPHENE		:ND:::	· · · · · · · · · · · · · · · · · · ·	·,·,·(ND,·,·		1,476.1	V	-, -1, 1474-1 , 1, 1,	. 7,1	~	V-1*, '+'+'+'	s Maria (s.).	(147)	. ~~.			14	1
SURROGATES										1		•						
AS & TETRACIALORO MAYCENE		11.6	9.74	8.37	8.22	9.33	58.2	46.7	13 t	54 4	1.8	(i.t.	46.6	13	154			
DECACHLOROBIPHENYL	1	13.7	12.0	11.7	9.80	11.0	68.6	59.8	25 1	40 5	3.7	49.0	54.9	25	140			ĺ

NOTES & DEFINITIONS :

LCS, MS & MSD apiked at 16.7 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/kg MS=MATRIX SPIKE

NA = NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

Serveral

DL = DILUTED OUT

NO = NOT DETECTED

ROL=REPORTING DETECTION LIMIT

500/00

NUMBER OF STREET, ASSESSED FOR

MARIETTA, OH

QUALITY CONTROL SUMMARY / 6080 SOILS , REAR

INSTRUMENT : HP 9

SAMPLE ID : 11-121-01

EXT'N DATE: 11/9/98

ANALYST : ECL

BLK FLNM: 1286

SMPL FLNM: 1289

EXT'N BENCH SHT: V104P73

RUN DATE: 11/10/98

LCS FLNM: 1287

MS FLNM: 1290

EXT'N WORK GRP: WG49010 ANAL WORK GRP: WG49090

MSD FLNM: 1291

		c	ONCEN	TRATIO	N,ug∕k	9			% RECO	VERY				F	ERCENT		∤	
COMPOUND	ROL	Blank	LCS	Sample		MSD	8lank	LCS	LCS LCS	Sample	MS	MSD	LCL	UCL	MS/MS D RPD	RPO Advisory LI	MANOR ADDITION	UNICODE CONTROL
	胡椒胡							di ni			SELECTION OF STREET							
ALPHA-BHC GANMA-BHC	1.7 1.7	ND ND	10.6 11.6	ND ND:	11.3 12.2	12.7 13.7	NA NA	63.4 69.6	37 134 32 127	NA NA	67.5 73.2	75.8 82.1	51 54	145 134	11.5	0-43 0-18		
BETA-BHC HERTACHLOR	1.7 1.7	ND ND	11.0 11.3	ND ND	11.5 12.0	12.7	NA NA	68.0 67.7	17 147 34 111	NA NA	58.7 71.9	76.2 80.5		129 139	10.3 11.3	0-28 0-37		
DELTA-BHC ALDRIN	1.7	ND ND	12.2 11.8	ND ND	12.8 12.4	14.0	NA NA	72.8 70.8	19 140 42 122	NA NA	76.7 74.5	83.7 83.4	1.77	138 143	8.7 -11,3	0-78 0-38		
HEPTACHLOR EPOXIDE	1.7 1.7	ND	12.0 NA	ND ND	12.4 NA	14.3 NA	NA NA	72.0 NA	37 142 45 (19	NA NA	74.4 NA	85.7 NA	51 .45	135 115	14.1 NA	0-40 0-40		
ALPHA-CHLORDANE ENDOSULFAN	1.7 1.7	NO	NA .9.70	ND ND	NA 10.2	NA 11.4	NA NA	NA - 58.1	54 119 45 153	NA	NA 66.6	NA 58.5	45	115 123	NA 11.9	0-17 0-22		
4,4-DOE DIBLORIN	3.3 3.3	ND ON	12.7 12.8	ND ND	13.7 13.4	14.9 15.1	NA NA	76.3 76.5	30 145 38 146	NA NA	81.8 60,3	89.4 90.3		152 171	8.9 :11.5	0-23 0-20		
ENDRIN 4.4-DDD	3.3 : 3.3	NO NO	11.7	ND ND	12.4 13.1	14.6 14.6	NA MA	69.9 74.0	30 147 31 141	NA NA	74.5 78.3	87.3 87.5		154 179	15.8 11.1	0-28 0-30		
ENDOSULFAN II	3.3 3.3	ND	9.27 12.8	ND ND	9.75 13.5	11.0 15.7	NA NA	55.5 76.4	D 202 25 160	NA NA	58.4 81.2	65.7 .94.0		117 168	11.8 14. 6	0-18 D-22		
ENORIN ALDEHYDE ENDOSJAPAN SULPATE	3.3 3.3	ND ND	7.85 7.48	ND ND	8.44 7.55	9.68 9.19	NA NA	47.0 44.8	NA NA 26 144	NA NA	50.5 45.2	58.0 55.0		115 217	13.7 19.5	0-40 0-30		
METHOXYCHLOR	17 33	ND	12.4	ND ND	12.3	15.3 11.6	NA NA	74.0 58.7	NA NA	NA NA	73.8 60.6	91.6 69.3	26	196 NA	21.5 13.4	0-19		
ENDRIN KETONE Tech-CHLORDANE	33	ND:	9,81 NA	ND	NA	NA	NA	NA	45 119	NA	NA	NA	45	115	NA NA	0-40 0:40		
TOXAPHENE	33::	ND:	:NA:::	···:ND;··	(: NA::)	NA:	NASSE:	NA :	41 :: t26:	NA ::	NA	···NA···	:40::	143				*(*(*(*)
SURROGATES										 			├──	┰				
KS, & TETRACHLORO MIXYLENE DECACHLOROBIPHENYL		13.4 16.0	11.7 15.2	10.5 11.9	9.69 12.5	8.67 13.5	66.B 80.1	58,3 75.9	13 154 25 140	52. 0 59.6	48.4 62.5	45.3 67.4	13 25	154 140				

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 16.7 ug/kg LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/kg

MS=MATRIX SPIKE

NA . NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

RIDL=REPORTING DETECTION LIMIT

KEMHON ENVIRONMENTAL SETIVICES MARIETTA, OF QUALITY CONTROL SUMMARY / 8061 WATERS , FRONT

INSTRUMENT: HIP9

SAMPLE ID: 11-126-02

EXT'N DATE: 11/9/98

ANALYST: ECI.

BLK FLNM: 1274 LCS FLNM: 1275

SMPL FLNM: 1298

EXT'N BENCH SHT: VIOAP75

BUNDATE: UZZOSB

MS FLNM: 1299

EXT'N WORK GRIP: WG40013 ANAL WORK GRIP: WG40001

MSD FLNM: 1300

			ONCE	TRATIO	ON, ug	ſ.			% Я	ECOV	ERY					PERCENT	·	
COMPOUND	FIDL	Bliwik	LCS	Sample	MS	MSD	Dlank	t.cs	rcs rcs		Sample	MS	MSD	MS LCL		MS/MSD nru	RPO Arlivsory Limits	Biank LCS Sample MS
ALPHA-OHC	0.05	ND	0.255	I ND	0,465	0.456	ŅA	51.0	37	134	NA .	46.5	45.6	51	145	2.0	0-43	
DAMMAHIK	0.05	`ND;∵	0.277) ND	σ.500	0.498	NA ::	. 55.4	32	127	NA :	50.0	∷ 49.8∶	54	334	0.4	0-18	
BETA-BIKC	0.05	סא	0.364	I ND	0.701	0.690	NA	72.8	17	147	NA.	70.1	69.0	51	129	1,6	0-28	
ŢŢŢŢŢŢŢŢŖŔŊŶĠŊĸŎŖŶŢŢŢŢŢŢ	0.05		0.250	i ŅD		0.515	NA.	56.0		99	∵ NÁ ∷	52.4	51,8		139	1997/99	0.37	
DELTA-BIC	0.05	ND	0.349	.*.*.*.*.*.	4,1,1,1,1,1	0.757	NA	69.8	19	140	, NA	70.2	75.7	56	138	7.5	0-78	00000000000
······································	0.05	NII.	0.263			0.509	∴ NA 🔆	56.6		155	, NA ::	. 52.0	50.9		143	(2.1)(()	0.38	
HEPTACHLON EPOXIDE.	0.05	ND	0.336	فرفرو والمراجرة	0.582		NA	67.2	37	142	NA	58.2	60.6	51	135	4.0	0.40	
:::::BWWW.chilohDWB	0.05	ŅO∵		1 ND	.∵NA⊹	.∴NĄ.	NA 11	∴ NA ∵		119	NA :	· NA;	ŅŅ.		115	(NASSE)	0-40	P00000000
ALPHA-CHLORDANE	0.05	ND	· · · · · ·	I ND	NA.	NA.	NA	NA .	54	119	NA .	NA .	NA	45	115	NA	0-17	lacacacac
:::::::ENDOSULFANI (-1::::::::::::::::::::::::::::::::::::	0.05	:ND:::	0.030	2.1.1.1.	0.565		ŊĄ		45	:153	::NA::::	56.5	58.6		123	::;3:6;:::::	0-22	
4,4-DOE	0.10	ND	0.349		• • • • • • •	0.649	NA	69.8	30	145	NA	62.5	64.9	64	152 ∵	3.8	0-23 0-20	<u>ը</u> 1555-1556
ĠĠĠĠĠĠĠĠ ĠĬŖŖŖŖĸ ĸĠĠĠĠĠĠĠ	: D.1D.		0.0/0		0.675		ŅĀ:	74.0	36	146	(NA	67.5	(69,2		(17.1	1,2	0-28	
ENDRIN	010	ND	0.349	arana ara	0.659	1.53.4	NA.	69.8	40.00	147	NA	65.9	65.1	.56 .56	154	2.7	0-20	
	0.10		0.381		0.755	· · · · ·	O ŅĀ ()	76.2		202	∴NA NA	75.5, . 65.3	64.6	.50 21	117	1.1	0-18	
ENDOSULFAN II	0.10	ND	0.347	وروز وروزورور	0.653		NA	69.4 74.0	D		NA :				168	0.4	0.72	6464666
(1000000000000000000000000000000000000	0:10:	`ŅD∵	0.376		0,744		, NV		1	160 NA	NA.	74.4 51.4	50 A	?4 21	115	1.2	0-40	1,1,1,1,1,1,1,1
FNEXUN ALDELIYIXE	010	ND	0.295	• • • • • • • •		0.508	NA	59.0 . \$6.0	NA.	.·. ·.			55.4	2! 31	113	3.6	0.30	1888811
CNER BUILTAN SULLIATE	0,10,		0.668	• • • •	•	0.554	NATE:		26.1 NA	NA	NA.:	52.0 60.8	68.2	26	196	0.9	0-19	
AH, IROXYOM ON	0.50 (: 0.10.	NO	0.140			0.005	NA NA	60.0	NA:	NA.	NA	60.8	04.2		ΝA	3.4		
AMOLTIN MERCINA		(ND)	0.3ឯ	, . ,		0.042		, ÇÇÇZI, NA	7!/\. 45	119	NA NA	NA.	.∵	45	115	NA	0-40	ratatatatatata
Tech-CHLORDANE	1.00	ND		I ND	NA ·	NA	NA 	NA :		126	NA ::	: NA:::		,	125	:NA:	∵0-40 · ·	lasasas
SECTION TO AN IENGLESS SECTION	1.00	·MX·	NA.	{∙:ND:	:::NA::	::NA:	:::NX:::	NA.		ika	٠, ١٩٧٩.٠٠	· John (-)	· ve		. 16.3	1,	n radioan	1,1,1,1,1,1,1,1,1,1
SURROGATES																		
e,4,5,6-1ETFACHLOGO M-XYLENE		6.52	. 6.72). 7:31 :	7:74	7.70	32.6	43.6	13	154	36.5.	.38.7	38.5		154			
DECACHLOROBIPHENYL		9.88		(8.38	6.89	9.60	49.4	68.7	25	140	41.9	34.4	48.0	25	140			

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 0.5 ug/L LCS=LABORATORY CONTROL SAMPLE

SURROGATES spiked at 20 ug/L

MS=MATRIX SPIKE

NA + NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

NO . NOT DETECTED

FIDE-REPORTING DETECTION LIMIT







KEMSION ENVIRONMENTAL BERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY/8061 WATERS , REAR

INSTRUMENT: HP9

SAMPLE ID: 11-126-02

EXT'N DATE : 11/9/98

ANALYST : ECL

SAMPLE ID : 11-12

EXT'N BENCH SHT : VIOAP75

NUN DATE: 11/10/00

BLK FLNM: 1274

LCS FLNM: 1275

SMPL FLNM: 1298 MS FLNM: 1299

EXT'N WORK GRP: WG49013 ANAL WORK GRP; WG49091

MSD FLNM: 1300

!			CONCE	NTRATI	ON, u	γL	<u> </u>		%	RECO	VERY					PERCENT			
COMPOUND	ROL	Blank	LCS	.Sampl	e MS	MSD	Blank	LCS		LCS UCL	Semple	MS	MSD	MS LCL		MS/MSD RPD	RPD Advisory Limists	Sank	Sample WS MSD
						PHAR				ii k		N HIN H							
ALPHA-NIC	0.05	ND	0.307	I ND	0.518	0.533	NA.	61.4	37	134	NA	51.8	53.3	51	145	2.9	0-43		व्यक्त्रियम्
GAMMA BHC	0.05	ND (0.352	i ND	0.623	0.655	NA:	70.4	:12	127	NA.	62.3	85.5	54	134	5.0	0-18		
RETA-BIIC	0.05	ND	0.383			0.814	NA 	76.6	17	147	NA.	74.2	81.4	51	129	9.3	0-28		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
DELTA-BHC	0.05	ND:	0.319			0.555		∰ 63:8 ;·	; 34 ;	0100	::NA::::	54:5	(1,55,5)	1	: 149	(11 18), (14)	0.47,		
ALDRIN	0.05	ND No:	0.441	ورو مرد م		0.850	NA NA	88.2 65.6	19	140 185	NA LLA:	80.5 	85.0	56	138	5.4	0-78		ationta
HEPTACINON EPOXIDE	0.05	ND	0.410			0.727	NA	, 05.6 82.0	.42 37	142 142	NA NA	∴57;3∷ 68,3	72.7	28 51	135	((3:3)(()) 6.2	0-40	***	
GAMMA-CHILDREDANE	0.05	ND	ŇA		NA:	: NA	NA .	···NA	45	119	NA:	NA:	NA I	45	115	NÁ:	0-40	::::	
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA .	NA.	54	119	NA	NA	NA	45	115	NA.	0-17		
ENDOSULFAN 1	0.05	ND	0.386	i∵NÒ∷	0.656	0.695	NA :	77.2	45	153	NA.	65.6	69.5	37	123	5.8	0-22		
4,4-DDE	0.10	ND	0.444	I ND	0.762	0.828	NA.	88.8	30	145	NA	78.2	82.8	64	152	5.7	0-23		
POR CONTRACTOR CONTRAC	ίρ iọ.	ND	0.441	(;NO:	0.795	0.828	: NA :	88:2	26	.146	, NA	79.5	82,8	23	(7,1	343333	0.20	1233	
ENDRIN	0.10	ND	0.382		0.743		NΛ	76.4	30	147	NA .	74.3	76.1	56	154	2.4	0-28		, . , .
34.04.04.04.4.000	0.10	. NO∷	0.444		0.869		ij ŅA	66.8		:)111	NA:	96.9	57.4	58	.179	0.b	0-30		
ENDOSULFAN II	0.10	ND ND	0.402	4.4.	0.745		NA	80.4	D	202	NA 	74.5	77.2	21	117	3.6 -::::::::::::::::::::::::::::::::::::	0-18	4334	Room
THININA MININA	010	NO	(0.449)-) 0.051		·(0.641) - 0.615		∵∵NA ; ; ; NA	::-89,8 ::: 20.2	25 NA	:160 NA	I NA	√8400√ - 81.5	:::07.6: αν α		168	1900010	0.40	(0.51)	Here
LINDOSERTAN SULFATE	0.10		0.346				NAC 1	67.2		1144	ONA 1	. 8.3	122	21 31	115	2.9 - 6.5	0.70	100	assa l
MI HOXYOTION	010	NO.	0.417		0.842		NA.	.:. 115.00 OXI	NΛ	NA.	NA.	84.2	82.5	26	196	20	0-19		
FRININKI, TONI	0.50.	ND :	1080	ON.	0.710		. NA		NΛ	NA.	NA :	71:0	75,6		NΛ	0.3			
Toch-CHILOFIDANE	1.0	ND	NA	ND	NA	NA	NA	NΛ	45	119	NA	NA	NA.	45	115	NA	0-40		
TOXANIENE	∵5.0	ND∵:	ЫА∷	i∵NO∵	:NA	NA	∵ NA ∷	NA :	41	126	·NX····	. NA	:::NX::	40	125	∴N A ::	0-40		
SURROGATES				·								-,							
Z.4.5.6-TET/TACHLORO M XYLENE DECACHLOROBIPHENYL	33333	7.44 12.4	9.33		8.52 8.37	9.76	37,2 62.2	46.7 88.3	i3 25	(154 140	40.0 47,9	42.6 41.9	48.8 64.8	13∷ 25	154 140	866666 8666666	\$65355		

NOTES & DEFINITIONS:

LCS, MS & MSD apiked at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURFICIATES spiked at 20 ug/L

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

NO - NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB SOILS , FRONT

INSTRUMENT: HP10

SMPLID: 11-121-01

EXT'N DATE: 11/9/98

ANALYST: CDB

SMPL FLNM: 011F0101

EXT'N BENCH SHT : V104P74

RUN DATE: 11/10/98

BLK FLNM: 009F0101 SMP1 LCS FLNM: 010F0101 MS

MS FLNM: 012F0101

EXT'N WORK GRP: WG49011

ANAL WORK GRP: WG49059

MSD FLNM: 013F0101

			CONCENT	RATION, s	ug/Kg				% REC	OVER	Υ						PERCENT					
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LC		Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	SOT	Sample	WS	QSW W.SD
AROCLOR 1016 AROCLOR 1221 AROCLOR 1232 AROCLOR 1242	17.0 17.0 17.0 17.0	ND ND ND	78.5 NA NA NA	ND NO ND ND	73.1 NA NA NA	75.7 NA NA NA	NA NA NA NA	94.3 NA NA NA	29 1 NA N NA N	A	NA NA NA NA	87.8 NA NA NA	90.9 NA NA NA	29 NA NA NA	131 * * * *	3.5 NA NA NA	NA NA NA					
AROCLOR 1248 AROCLOR 1264 AROCLOR 1280	17.0 33.0 33.0	ND ND NO	NA NA 70.2	ND ND ND	NA NA 67.8	NA NA 66.6	NA NA NA	NA NA 84.3	NA I	IA IA 31	NA NA NA	NA NA 81.3	NA NA 79.9	NA NA 29	NA NA 131	NA NA 1.8	NA 0-40 NA					
SURROGATES 2.4.5.8-TETRACHLORO-MAXYLENE DECACHLOROBIPHENYL		5.32 5.14	5.44 5.23	3,55 3,33	4.55 4.09	1.99	79.8 77.0	81.5 78.4	29 1 30 1	33 73	53.3 49.9	55.2 61.4	29.9 64.8	29 30	133 173							

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 83.3 ug/kg SURROGATES spiked at 6.87 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

ENVIRONM TAL SERVICES	
CHAIN-OF-CUSTODY	RECORD

Sample	Sampler (print): Signature:									T					T											
Sample	Sample																									
Sample	Sample																									
Sample	Sample								-		-	\neg	1	1	-	-	-							_		
Sample	Sample	18MPBLANIC							1			\neg	$\overline{}$										-			
Sample	Sample				_h[03	178								1			<u> </u>	-				_		_		
Sample S	Sample S	W812110498	×		-nD	17/2		 	1					1												
Sample i.D. No. Date Time CWA SW846 Z P S S S S S S S S S S S S S S S S S S	Sample i.D. No. Date Time CWA SW846 Z P S S S S S S S S S S S S S S S S S S	M:1x 110598		\leq	11/05/	9	1205		4		ì		1	1			1_								<u></u>	<u></u>
Sample I.D. No. Date Time CWA SW846 P P S S S S S S S S S S S S S S S S S	Sample I.D. No. Date Time CWA SW846 P. P. S. S. S. S. S. S. S. S. S. S. S. S. S.	NI STIDSAR		×	l. ite	-C2	1240				+	1	$\frac{1}{1}$	$\frac{1}{\sqrt{1}}$	+	+	+-	-	1-	-	-	-	-		NIDER	T^{-}
							Time	 		Hold	- 5VQ	一场	- 100/	, (S)		-	-			_	_				REQUIREMEN	
Sampler (print): Signature:	Sampler (print):	JSF		· · · · · ·	(2	Do		%		-1	PrBs	/												ADDITIONAL	
Project No.: Project Name;	Project No.: Project Name:	Project No.: Project Na Sampler (print):	1	dv	20/	hure:	w	 	PLES								ŀ	-								

Work Order GRITII Client Versay Mg #16 Samples Q Due Date 11-20 Page nple # Analyses Reason Removed By Removed From Moved To Reliq. By Rei'd by Rei'd Ree'd Reason By Grings Sur Removed By Removed By Removed By Removed By Removed By Rei'											
ADT From By ADT To By Ret d by Ret d By Reason TES 02 Test schlidisco welken wet Bra cultivisio coallein Bra Storacy 3 80818185 Ext en 119198 80850 wolk-in \$110 53 1104188 poor Archive Bla Archive 2,41,56 TSS Anal Dign-09/1800 wolk-in \$110 Bray 11-1048 0000 amport 15 Archive 4 PB SX 11998 080 wolk-in \$110 Bray 11-1048 0000 amport 15 Quarant 7.4 BNA Ext 11998 0100 WALKER FAB Bla Sund Images D Quarant		Work Order	<u> </u>	11 Client	Versar	Mg #of Si	umples	Due Date_	11-20	l'age	_
TS 02 Test achinicipal working wet Bro cultilities coaltin Bro Storage 3 808111110 EXT QUINIAIR POSSO WOLK-IN \$110 US INDAIRS POSSO Archive Blg Archive 2,4,5,6 TSS And Dign-09/1000 wolk-IN bet Blg Out 11-09-91/1200 Archive US Archive 4 PBS SXT DIGN-99/1000 WOLK-IN \$110 Bro MILLIA BOOD Dumpote US Archive 7.4 BNA Ext 119/99 0100 WALKEN FLAS BIG WILLIAM OF OUT IN 11-10-18 DOWN Dumpote US Comment	nple#		Reason			MovedTo			ł.		Reason
2,4,5,6 TSS And Dir 11-09/1800 Walk-IN Wet Big ON 11-09-91/1200 Archive Big Archive 4 MB SKI DIV 11-99/1800 WALK-IN SIB BIG MIN 11-10-98 DOWN Ampate ND Respond 7.4 BNA Ext 119/98 0100 WALKEN FLAB BIG SWILL HARROWS ON OWNET 173 Demand	TS	Ô2	<u> </u>	ach hololisco	walken	wet	Bra	authilulisio	coalkin	Bra	Storage
4 PB SKI DIFFERE OF WALKET FLAG BLG DULL-04-91/1200 Archive 15 Archive 14 BNA Ext 1/9/98 0800 WALKET FLAG BLG SWILL HARROWS ON DEMONSTRATE ITS Designed	3	803111 kV	EXT	Eik 11/9/43 608 20	WOLK-114	5-1113	1	1104/48 (20830			
4 PB SXI BY 1+9-488 0800 WOLK-IT SIB BIG 5000 amport 15 Respond	1,4,5,6	T 5 5	Anol ,	Dix 11-09/1500 1	ruk IN	wet	BIG			-	
374 BNA Ext W91982 O 1100 WALKEN FLAG 1010 SUPULIFINATIONS OF THE ATT OF SMELL	,4	PCB	SUC	AC 1 1 0 660 ACX				 	l .		
BNA EXT 119/1980 1150 WALKEN EAG DIG 11/09/98 P1410 Archive DIG Archive -4 8260 and 11/10/98 @ 1245 V-1 VOAT DIG 1/12/98 N.30 Archive		BNA	Ext	17/3/33 (3 1190)	WALKIN	FLAB	1314	S016 1 11-10 08 22 191	0	13	•
8260 and Molas @ 1245 V-1 VOA BY Misso Archie 173 Archie		BNA	EH	<u> </u>	WALKEN	ELAG	Big	11/09/98 01410	Archiva	Ø19	. 1
	-4	8260	anal	11/10/98 @ 1245-	V-1	VOA	Bià	1/27/44 1630	Acchui	کرر	Archu
	-				<u> </u>		J		<u> </u>		
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KEMRON Envi 109 S lite Park Marietta, Ohio 45750 Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road

Columbia, MD 21045-1934

Login #: L9811172 Report Date: 11/23/98

Work ID: 4119-007/PACOE PEDRICKTOWN
Date Received: 11/10/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample	
Number	Description	Number	Description	
L9811172-01 L9811172-03 L9811172-05	WEIR 1109A WEIR 1107 MIX 1109	L9811172-02 L9811172-04	WEIR 1109B WEIR 1106	

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Dennis S. Tepe



KEMRON ENVIRONMENTAL SERVICES

Login #L9811172 November 23, 1998 03:19 pm

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 11/09/98 0930 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
Total Suspended Solids	mg/L	28		5.0	1	N/A	DLN	11/10/98	09:16 160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Date Collected: 11/09/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: 11/12/98
Analysis Date: 11/13/98 Time: 19:32

Instrument: HP10

Analyst: CDB Lab File ID: 018F0101

Method: 8082/3550 Run ID: R56396

Batch : WG49301

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURI	ROGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene	45.9 52.0	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/14/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/09/98

% Solid: N/A

Instrument: HP9
Analyst: ECL
Lab File ID: 1381

Method: 8081A\3510C

Run ID: R56335 Batch: WG49308

CAS #	Compound	Units	Result Oualifiers	5. -	-13 1
210.04.6		V111.CB	Result Qualifiers	RL	Dilution
319-84-6 319-85-7	alpha-BHC	ug/L	ND	0.05	1
319-86-8	Deta-BRC	ug/L	ND	0.05	វិ
58-89-9	Gerta-BHC	ug/L	ND	0.05	ī
76-44-8	gaillia Brc (Lingane)	ug/L	ND	0.05	ī
309-00-2	Heptachlor	ug/L	ND	0.05	ī
1024-57-3	Aldrin.	ug/L	ND	0.05	ī ·
959-98-8	Heptachlor epoxide	ug/L	ND	0.05	ī
60-57-1	BHQUBULLAN I	ug/L	ND	0.05	ī
72-55-9	Dieldrin.	ug/L	ND	0.10	ī
72-20-8	4,4'-DDE	ug/L	ND	0.10	1
33213-65-9	Endrin. Endosulfan II.	ug/L	ND	0.10	1
72-54-8	4 4!-DDD		ND	0.10	1
1031-07-8	4,4'-DDD. Endosulfan sulfate	ug/L	ND	0.10	1
50-29-3	4,4'-DDT	ug/L	ND	0.10	1
72-43-5	4,4'-DDT. Methoychlor	ug/L	ND	0.10	1
53494-70-5	Endrin ketone	ug/L	ND	0.50	1
7421-93-4	Endrin aldehyde	ug/L	MD	0.10	1
5103-71-9	alpha Chlordane	ug/L	ND	0.10	1
5103-74-2	gamma Chlordane	ug/L	ND	0.05	1
8001-35-2	Toxaphene	ug/L	мD	0.05	ļ
		ug/L	ND	1.0	1
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	33.1	(12 154%)		
	Decachlorobiphenyl	51.3			
		51.3	. (25 - 1408)		•

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/09/98 % Solid: N/A

TCLP Extract Date: N/A Method: 8270C\3510C Instrument: HPMS7

Extract Date: 11/11/98 Analyst: MLS Run ID: R56494 Analysis Date: 11/13/98 Time: 12:21 Lab File ID: 6458 Batch: WG49371

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	10	2	
95-57-8	2-Chiorophenol	ug/L	ND	10	2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2	
111-91-1	Bis (2-Chloroethoxy) Methane	uq/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Naphthalene	ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	10	2	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10 .	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88-74-4	2-Nitroaniline	ug/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ND	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	ND	10	2	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2	
		-5/ -				

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Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Date Collected: 11/09/98

Extract Volume: N/A

Sample Weight: N/A

Instrument: HPMS7

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Method: 8270C\3510C Run ID: R56494 Batch: WG49371

TCLP Extract Date: N/A Extract Date: 11/11/98 Analysis Date: 11/13/98 Time: 12:21

Analyst: MLS Lab File ID: 6458

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L	\m	1 ^	2
100-01-6	4-Nitroaniline	ug/L	ND ND	10 50	3
534-52-1	4,6-Dinitro-2-methylphenol	ug/L	ND	50 50	4
86-30-6	N-Nitrosodiphenylamine	ug/L	ND	10	4
101-55-3	4-Bromophenvi-phenvlether	ug/L	ND	10	4
118-74-1	Hexachlorobenzene	ug/L	ND ND	10	. 4
87-86-5	Pentachlorophenol	ug/L	ND		2
85-01-8	Phenanthrene	ug/L	ND ND	50	4
120-12-7	Anthracene	ug/L	ND	10	4
86-74-8		ug/L		10	2
84-74-2	Di-N-Butylphthalate	ug/L	ND ND	10 10	2
206-44-0	Fluoranthene				2
129-00-0	Durana	ug/L ug/L	йD	10 10	2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a)anthracene.		žD		4
91-94-1	3.3'-Dichlorobenzidine	ug/L	ЙD	10	2
56-55-3	Benzo (a) anthracene	ug/L	<u>700</u>	20	2
218-01-9	Chrysene	ug/L	MD	10	2
117-81-7	Chrysene. bis(2-Ethylhexyl)phthalate.	ug/L	ND	10	2
117-84-0	Di-n-octylphthalate	ug/L	ИD	10	2
205-99-2	Benzo(b) fluoranthene	ug/L	MD	10	2
207-08-9	Benzo (k) fluoranthene	ug/L	ЙD	10	2
50-32-8	Benzo (a) pyrene	ug/L	йD	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L	MD	10	2
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ND	10	2
191-24-2	Benzo (g, h, i) Perylene	ug/L	ND	10	2
*** ** **	Demzo (g, m, 1) ret ytelle	ug/L	ND	10	2
SURR	OGATES- In Percent Recovery:				
	2-Fluorophenol	37.9	(21 - 100%)		
	Phenol-d5	23.0	(10 - 94%)		
	Nitrobenzene-d5	54.7	(35 - 114%)		
	2-Fluorobinhenvl	61.7	(43 - 116%)		
	2-Fluorobiphenyl	107	(10 - 123%)		
	n-Ternhenyl-d14	117			
	p-Terphenyl-d14	TT /	(33 - 141%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811172-01 Client Sample ID: WEIR 1109A Site/Work ID: 4119-007/PACOE PEDRICKTOWN Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

Matrix: Water Date Collected: 11/09/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS9 Method: 8260B Run ID: R56562

Extract Date: N/A
Analysis Date: 11/19/98 Time: 18:43 Analyst: SLT Lab File ID: 9VR00364 Batch : WG49590

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L	ND	10	1
74-83-9	Bromomethane	ug/L	ND	10	ī
75-01-4	Vinyl chloride	ug/L	ND	ĩŏ	ī
75-00-3	Chloroethane	ug/L	ND	īŏ	ī
75-09-2	Methylene chloride	ug/L	ND	5.0	ī
67-64-1	Acetone	ug/L	ND	10	์ เ
75-15-0	Carbon disulfide	ug/L	ND	Ť.0	ī
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	ī
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	ī
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	ī
67-66-3	Chloroform	ug/L	ND	5.0	ī
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	ī
78-93-3	2-Butanone	ug/L	ND	10	ī
71-55-6	1,1,1-Trichloroethane	ug/L	ND	5.0	ï
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	ī
75-27-4	Bromodichloromethane	ug/L	ND	5.0	ī
78-87-5	1,2-Dichloropropane	ug/L	ND	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L	ND	5.0	1 ·
79-01-6	Trichloroethene	ug/L	ND	5.0	1
124-48-1	Dibromochloromethane	ug/L	ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L	ND	5.0	1
71-43-2	Benzene	ug/L	ND	5.0	1
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	1
75-25-2	Bromoform	ug/L	ND	5.0	1
108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	1
591-78-6	2-Hexanone	ug/L	ND	10	1
127-18-4	Tetrachloroethene	ug/L	ND ·	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND ·	5.0	1
108-88-3	Toluene	ug/L	ND	5.0	1
108-90-7	Chlorobenzene	ug/L	ND	5.0	1
100-41-4	Ethyl benzene	ug/L	ND	5.0	1
100-42-5	Styrene	ug/L	ND	5.0	1
1330-20-7	Xylenes, Total	ug/L	ND	5.0	1
SURR	OGATES- In Percent Recovery:				
	Dibromofluoromethane	103	(86 - 118%)		
	1,2-Dichloroethane-d4	96 <i>.</i> 7	(80 - 120%)		
	Toluene-d8	95.3	(88 - 110%)		
	p-Bromofluorobenzene	92.2	(86 - 115%)		

RL - Reporting Limit

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Login #L98 72 November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811172-02 Client Sample ID: WEIR 1109B Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/09/98 0930 COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	31		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Lab Sample ID: L9811172-03 Client Sample ID: WEIR 1107 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 11/09/98 0930 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	26		5.0	1	N/A	DLN	11/10/98	09:16	160.2

Lab Sample ID: L9811172-04 Client Sample ID: WEIR 1106 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/09/98 0930 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
Total Suspended Solids	mg/L	27	- · · · · · · · · · · · · · · · · · · ·	5.0	1	N/A	DLN	11/10/98	09:16 160.2

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/09/98 1000 COC Info: N/A

	· · · ·			 		 -		
Analyte	Units	Result Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method
Total Suspended Solids	mg/L	29	5.0	1	N/A	DLN	11/10/98	09:16 160.2

Login #L9811172 November 23, 1998 03:19 pm

TCLP Extract Date: N/A

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109

Extract Date: 11/12/98

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Analysis Date: 11/13/98 Time: 20:07

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/09/98 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HP10

Analyst: CDB Lab File ID: 019F0101 Run ID: R56396 Batch : WG49301

Method: 8082/3550

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.60 0.60 0.60 0.60 0.60 1.2	1.2 1.2 1.2 1.2 1.2 1.2
SURI	COGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	75.8 55.8	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/09/98

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: 11/12/98

Analysis Date: 11/14/98 Time:

Instrument: HP9 Analyst: ECL Lab File ID: 1382 Method: 8081A\3510C Run ID: R56335 Batch : WG49308

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
319-84-6 319-85-7 319-86-8 58-89-9 76-44-8 309-00-2 1024-57-3	alpha-BHC. beta-BHC. delta-BHC. gamma-BHC (Lindane). Heptachlor. Aldrin. Heptachlor epoxide.	uğ/L. ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.055 0.055 0.055 0.055 0.055 0.055	1.1 1.1 1.1 1.1 1.1 1.1	

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/12/98
Analysis Date: 11/14/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/09/98

% Solid: N/A

Instrument: HP9 Analyst: ECL Lab File ID: 1382 Method: 8081A\3510C Run ID: R56335 Batch : WG49308

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
959-98-8	Endosulfan I	11~ /T			
60-57-1	Dieldrin	ug/L	МD	0.055	1.1
72-55-9	4,4'-DDE.	ug/L	ND	0.11	1.1
72-20-8	Endrin	ug/L	ND	0.11	1.1
33213-65-9	Endrin	ug/L	ND	0.11	1.1
72-54-8	Endosulfan II	ug/L	ND	0.11	1.1
1031-07-8	4,4'-DDD.	ug/L	ND	0.11	1.1
50-29-3	Endosulfan sulfate	ug/L	ND	0.11	1.1
72-43-5	4,4'-DDT.	ug/L	ND	0.11	1.1
53494-70-5	Methoxychlor	ug/L	ND	0.55	1.1
7421-93-4	Endrin ketone	ug/L	ND	0.11	1.1
5103-71-9	Endrin aldehyde	ug/L	ND	0.11	1.1
5103-71-9	alpha Chlordane	ug/L	ND	0.055	1.1
8001-35-2	gamma Chiordane	ug/L	ND	0.055	1.1
6001-35-2	Toxaphene	uğ/L	ND	1.1	ī.ī
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	63.5	/ 13 1546\		
	Decachlorobiphenyl		(13 - 154%)		
		67.4	(25 - 140%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

% Solid: N/A Date Collected: 11/09/98

Method: 8270C\3510C Instrument: HPMS7

TCLP Extract Date: N/A
Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 13:00 Run ID: R56494 Analyst: MLS Lab File ID: 6459 Batch : WG49371

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis(2-Chloroethyl)ether	uğ/L	ND	10	2	
95-57-8	2-Chlorophenol	ug/L	ND	10	2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2	
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	ĩŏ	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	ïo	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Naphthalene	ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	10	$\bar{2}$	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2 .	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND.	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88-74-4	2-Nitroaniline	ug/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ND	10	2	
606-20-2	2.6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	ND	10	2	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	ĩo	2	
84-66-2	Diethylphthalate	ug/L	ND	īŏ	$\bar{2}$	
7005-72-3	A_Chlorophonul_phonul_ather	ug/L	ND	10	$\frac{7}{2}$	
1005-12-3	4-Chlorophenyl-phenyl ether	49/11	\$14./		-	

TCLP Extract Date: N/A

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811172-05

Client Sample ID: MIX 1109 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/09/98

% Solid: N/A

Instrument: HPMS7

Method: 8270C\3510C

Analyst: MLS Lab File ID: 6459

Run ID: R56494 Batch : WG49371

Extract Date: 11/11/98
Analysis Date: 11/13/98 Time: 13:00

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L	ND	10	2
100-01-6	4-Witrospilino	ug/L	ND	50	2
534-52-1	4.6-Dinitro-2-methylphenol	ug/L	ND	50	5
86-30-6	N-Nitrosodiphenylamine	ug/L	ND	10	ź
101-55-3	N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether.	ug/L	ND	10	2
118-74-1	nexachioropenzene	ug/L	ND	10	2
87-86-5	Pentachlorophenol	ug/L	ND	50	5
85-01-8	Phenanthrene	ug/L	ND	10	"
120-12-7	Anthracene	ug/L	ND	10	2
86-74-8	Carpazole	ug/L	ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L	ND ND	10	2
206-44-0	Fluoranthene	ug/L	ND ND	10	ź
129-00-0	Pyrene	ug/L	ND ND	10	2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a)anthracene.	ug/L	ND ND	10	4
91-94-1	3.3'-Dichlorobenzidine	ug/L	ND ND	20	2
56-55-3	Benzo (a) anthracene	ug/L	ND ND	10	2
218-01-9	Chrysene	ug/L	ND ND	10	2
117-81-7	Chrysene. bis(2-Ethylhexyl)phthalate	ug/L	ND ND		4
117-84-0	Di-n-octylphthalate	ug/L	ND ND	10	2 2
205-99-2	Benzo (b) fluoranthene			10 10	2
207-08-9	Benzo (k) fluoranthene	ug/L	ND ND	10	
50-32-8	Benzo (a) pyrene	ug/L		10	2 2 2
193-39-5	Indeno(1,2,3-cd) pyrene	ug/L	ND ND	10	4
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ND ND		4
191-24-2	Benzo(g,h,i) Perylene	ug/L		10	2 2
171 W. D	benzo.(g).n; 1/relytene	ug/L	ND	10	. 4
SURR	GATES- In Percent Recovery:				
	2-Fluorophenol	38.1	(21 - 100%)		
	Phenol-d5	22.5	(10 - 94%)		
	Nitrobenzene-d5	57.9	(35 - 114%)		
	2-Fluorobiphenyl	66.5	(43 - 116%)		
	2-Fluorobiphenyl	96.8	(10 - 123%)		
	p-Terphenyl-d14	107	(33 - 141%)		
		- ,	, 55 2120/		

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811172-05 Client Sample ID: MIX 1109 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Date Collected: 11/09/98

% Solid: N/A

TCLP Extract Date: N/A Extract Date: N/A Method: 8260B Run ID: R56562 Batch : WG49590 Instrument: HPMS9 Analyst: SLT Lab File ID: 9VR00365 Analysis Date: 11/19/98 Time: 19:19

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L	ND	10	7
74-83-9	Bromomethane	ug/L	ND	10	†
75-01-4	Vinyl chloride	ug/L	ND	10	†
75-00-3	Chloroethane	ug/L	ND	10	Ť
75-09-2	Methylene chloride	ug/L	ND	5.0	*
67-64-1	Acetone	ug/L	ND	10	*
75-15-0	Carbon disulfide	ug/L	ND ND	5.0	*
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	†
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	†
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	†
67-66-3	Chloroform	ug/L	ND	5.0	†
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	*
78-93-3	2-Butanone	ug/L	ND	10	†
71-55-6	1,1,1-Trichloroethane	ug/L	ND	5.0	†
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	*
75-27-4	Bromodichloromethane	ug/L	ND	5.0	1
78-87-5	1,2-Dichloropropane	ug/L	ND	5.0	7
10061-01-5	cis-1,3-Dichloropropene	ug/L	ND	5.0	Ť
79-01-6	Trichloroethene	ug/L	ND	5.0	Ŧ
124-48-1	Dibromochloromethane	ug/L	ND	5.0	Ť
79-00-5	1,1,2-Trichloroethane	ug/L	ND	5.0	ĩ
71-43-2	Benzene	ug/L	ND	5.0	ī
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	ī
75-25-2	Bromoform	ug/L	ND	5.0	ī
. 108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	ī
591-78-6	2-Hexanone	ug/L	ND	īŏ	ī
127-18-4	Tetrachloroethene	ug/L	ND	5.0	ī
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	ī
108-88-3	Toluene	ug/L	ND	5.0	1
108-90-7	Chlorobenzene	ug/L	ND	5.0	1
100-41-4	Ethyl benzene	ug/L	ND	5.0	ī
100-42-5	Styrene	ug/L	ND	5.0	ī
1330-20-7	Xylenes, Total	ug/L	ND	5.0	ī
		~3/ ~	3.2		_
SURR	OGATES- In Percent Recovery:				
	Dibromofluoromethane	101	(86 - 118%)		·
	1,2-Dichloroethane-d4	93.9	(80 - 120%)		
	Toluene-d8	94.7	(88 - 110%)		
	p-Bromofluorobenzene	92.7	(86 - 115%)		
		<u> </u>			

Order #: 98-11-172 November 23, 1998 03:19 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work			Dil				Date	Run	Run	
Group	Run ID	Sample	Type Matrix	Product	Method	Analyst	Collected	Date	Time	Department
WG49178	R56020	L9811172-01	Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-02	Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-03	Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-04	Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49178	R56020	L9811172-05	Water	Total Suspended Solids	160.2	DLN	09-NOV-1998	10-NOV-1998	09:16	Conventionals
WG49216	R56494	L9811172-01	Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	12:21	Extraction
WG49216	R56494	L9811172-05	Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	13:00	Extraction
WG49246	R56335	L9811172-01	Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Extraction
WG49246	R56335	L9811172-05	Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Extraction
WG49247	R56396	L9811172-01	Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	19:32	Extraction
WG49247	R56396	L9811172-05	Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	20:07	Extraction
WG49301	R56396	L9811172-01	Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	19:32	Semivolatile - GC
WG49301	R56396	L9811172-05	Water	PCB's (Water)	8082/3550	CDB	09-NOV-1998	13-NOV-1998	20:07	Semivolatile - GC
WG49308	R56335	L9811172-01	Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Semivolatile - GC
WG49308	R56335	L9811172-05	Water	Organochlorine Pesticides	8081A\3510C	ECL	09-NOV-1998	14-NOV-1998		Semivolatile - GC
WG49371	R56494	L9811172-01	Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	12:21	Semivolatile - GC/MS
WG49371	R56494	L9811172-05	Water	TCL Semivolatiles	8270C\3510C	MLS	09-NOV-1998	13-NOV-1998	13:00	Semivolatile - GC/MS
WG49590	R56562	L9811172-01	Water	TCL Volatiles	8260B	SLT	09-NOV-1998	19-NOV-1998	18:43	Volatile - GC/MS
WG49590	R56562	L9811172-05	Water	TCL Volatiles	8260B	SLT	09-NOV-1998	19-NOV-1998	19:19	Volatile - GC/MS

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark BAD - - Becky A. Diehl CEB - - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens CRC - - Carla R. Cochran DIH - - Deanna I. Hesson DKM - - Dewey K. Miller DLN - - Deanna L. Norton DLP - - Dorothy L. Payne ECL - - Eric C. Lawson FEH - - Fay E. Harmon HV - - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH - - Ji Y. Hu KHA - - Kim H. Archer KMS - - Kevin M. Stutler KRA - - Kathy R. Albertson MDA - - Mike D. Albertson

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - - Michael L. Schimmel MMB - - Maren M. Beery RDC - - Rebecca D. Cutlip RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - - Robert E. Kyer RSS - - Regina S. Simmons RWC - - Rodney W. Campbell SJK - Sindy J. Kinney SJM - - Shawn J. Marshall SLP - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TIW - - Thomas J. Ware TRS - - Todd R. Stack VC - Vicki Collier VMN - - Vincent M. Nedeff

Quali	fier	Description	Qualifier	Description
(A)	See the	report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the	report narrative	NA	Not applicable
(C)		report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correla	tion coefficient for the MSA is less than 0.995	NF	Not found
<	Less th	an ·	NFL	No free liquid
>	Greater		NI	Non-ignitable
В	Present	in the method blank	NR	Analyte is not required to be analyzed
C		ned by GC/MS	NS	Not spiked
*	Surroga	ate or spike compound out of range	P	Concentration > 25% difference between the two GC
~~				columns
CG		ent growth	QNS	Quantity not sufficient to perform analysis
D		llyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL		te or spike was diluted out	RA	Reanalysis confirms reported results
E		ed concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F		below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liq	•	SMI	Sample matrix interference on surrogate
I	Semiqu	antitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present	below nominal reporting limit	TNTC	Too numerous to count
L	Sample	reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M		te injection precision not met	W	Post-digestion spike for furnace AA out of control limits
			X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC



NVIKUNMEN I AL SEKVICES Y LABORATORY QUALITY CONTROL SUMMARY

WORKGROUP:

wg49178

RUN DATE: 11/10/98

METHOD:

160.2

ANALYST: din

MATRIX:

Water

DUPLICATE: 11-144-03

UNITS: ma/L

													ENT RECO			PERCENT	T RPD
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	REP RPD	RPD UCL
TSS	5.00	ND	50.00	50.00	ДИ	ND	NR	NR	NR	100.0	81.0	114.5	NR	NR	NR	NA	20.00

NOTES & DEFINITIONS :

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

ND = NOT DETECTED

NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPO = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



KEMRON ENVIRONMENTAL SERVICES, OVI. SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49371

PREP WORK GRP: WG49216

METHOD: 8270

EXT DATE: 11/11/98 BENCH SHEET : V104P99 RUN DATE: 11/13/98

INSTRUMENT: HPMST ANALYST: MLS

MATRIX: WATER CONCENTRATION UNITS: UG/L

BLK FLNM: 6456 LCS FLNM: 6457

SMPL ID: L9811209-01 WATER SMPL FLNM: 9/7/17

9/8/17

MS FLNM: MSD FLNM: 9/9/17

				CONCE	NTRATION	,υg/L						PERCEN	VT RECOVE	RY , %		_			PERCE	·π		BEYO	
ANALYTE	RDL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE	MS	MSD	BLANK	LCS	ics ici	LCS UCL	SAMPLE	MS	MSD	MS LCL	. MIS UCL	MSO RPD	RPO UCL	BEYON D RPD LIMIT	SAMPLE	BLANK ICS	SE
DIETHYLPHTHALATE	5.0	ND	100	94,3	ND	100	83.2	105.5	NA.	94.3	5	114	NA.	83.2	105.5	5	114	24	40				T
LUORENE	5.0	NO.	100	75.8	ND	100	71.5	92.0	NA.	75.6	25	158	NA .	71.5	92.0	25	158	25	- 40	!			
-CHLOROPHENYL-PHENYL ETHE	5.0	ND	100	68.9	ND	100	66.6	86.4	NA	58.9	59	121	NA.	66.6	85.4	59	121	26	40				.11
NITROANILINE	25.0	ND	100	96.1	ND	100	87.2	101.3	NA .	96.1	. 6	150	NA.	87.2	101.3	5	150	15	40				
2-DIPHENYLHYDRAZINE *	5.0	ND	100	64.4	ND	100	60.0	78.4	NA NA	64.4	5	150	NA.	60.0	78.4	5	150	27	40]	l		1
B-DINTIRO-2-METHYLPHENOL	25 O	ND	100	91.4	ND	100	77.5	91.6	NA	91.4	3	181	NA .	77.5	91.6	5	181	17	40				
-NITROSODIPHENYLAMINE **	5.0	ND	100	96.3	ND	100	87.1	105.7	NA	96.3	5	150	NA	87.1	105.7	5	150	19	40	1			1
BROMOPHENYL PHENYL ETHE	5.0	ND	100	71.5	NO	100	65.5	83.7	NA .	71.6	53	127	NA .	66.5	83.7	63	127	24	40				
EXACHLOROBENZENE	5.0	ND	100	93.3	ND	100	81.6	102.6	NA	93.3	5	152	NA NA	81.6	102.6	. 5	152	23	40				.][.
ENTACHLOROPHENOL	25,0	NO	1DQ	89.9	ND	100	82.0	94.1	NA .	59.9	14	175	NA .	82.0	94.1	314	176	14	40			*	
HENANTHRENE	5.0	ND	100	105,1	ND	100	94.1	112.2	NA	105.1	54	120	NA	94.1	112.2	. 54	120	18	40				dand.
VITHRAGENE	5.0	ND	100	106.5	ND.	100	93,4	111.5	NA:	106.6	27	133	NA.	93.4	111.6	27	193	18	40				
VRBAZOLE	5.0	ND	100	134,5	ND	100	114,6	133.7	NA.	134.5	5	150	NA .	114.6	133.7	5	150	15	40	I		1	1
IN-BUTYLPHTHALATE	5.0	ND	100	119.7	ND	100	106.2	121,0	NA.	119.7		118	NA .	108.2	121.0	1	118	13	40			2 H	
LUORANTHENE	5.0	ND	100	122.4	ND	100	109.9	123,4	NA .	122.4	26	137	NA.	109.9	123.4	26	137	12	40		500 20 AG		
YRENE	6.0	ND	100	1126	NO	100	88.8	111.5	NA .	112.5	52	116	NA .	98.8	111.5	62	145	12	40				4884
JTYLBENZYLPHTHALATE	5.0	ND	100	118.8	ND	100	104.4	117.7	NA.	118.8	5	152	NA	104.4	117.7	5	152	12	40		2000		Amerika
ENZOJAJANTHRAGENE	10,0	ND	100	1121	ND	100	99.7	112.7	NA	112.1	\$	762	NA .	99.7	112,2	5.5	262	12	40			** 	4888
3'-DICHLOROBENZIOINE	5.0	ND	100	79.2	ND	100	98.9	123.7	NA .	79.2	33	143	NA .	98.9	123.7	33	143	22	40	00.000.000.000	2000 50	997 898	dossolo
HRYSENE	5.0	ND	100	110.1	ND	100	97.6	110.3	NA .	110.1	17	168		97.6	140.3	30.1Km	158	12	40	200000	800 B	8	33.8
IS(2-ETHYLHEXYL)PHTHALATE	5.0	ND	100	116.6	ND	100	102.6	115.0	NA.	116.6	8	158	NA .	102.6	115.0	8	158		40	0.000,000,000,000	000000	ere 50000	0000000
HN-OCTYLPHTHALATE	5.0	ND	100	121.5	NO	100	105.2	121,5	NA .	121.5	.	146	NA	105.2	121.5		346	(4	40		9343 (S)		1888
ENZOJBJELUORANTHENE	5.Q	NO	100	121,6	ND	100	100.3	123.2	NA.	121.6	24	159	NA	100.3	123.2	24	159	20	40	D0000001065 NO	2007	ess/10000	tesselv
ENZOKIFLUORANTHENE	5.0	ND	100	118.0	ND	100	108.1	118.9	NA.	118.0	11	162	NA S	108.1	118.9	3918	162	10	- 40			3 30	
ENZO(A)PYRENE	5.0	ND	100	115.4	ND	100	98.7	115.8	NA	115.4	17	163	NA.	98.7	115.8	17	163	16	40	00/00/01/05/01/0	8500 80	32. 220 H	
DENC(1,23-CDIPYRENE	5.0	NO	100	8.00	ND	100	77,9	90.9	NA .	90.8	\$	17\$	NA S	77.9	90.9	5	171	15		10000000000000000000000000000000000000		88 885	100000
BENZIA HIANTHRACENE	5.0	NO	100	97,4	ND	100	84.2	98.4	NA.	97.4	5	227	NA.	84.2	98.4	5	227	15	40	Essencia de la compositorio	3333 Ex	221 535 X	lass l
enzoig, huperylene	5.0	ND	100	85.4	ND	100	73.0	84.5	NA .	85.4	. 6	219	NA	73.0	84,5	5	219	15	40	kassasi.		881 (889) .	18888
SURROGATES		L														<u> </u>	<u> </u>	<u> </u>			_	4	┷
FLUOROPHENOL		49.1	100	31,9	37.3	100	31.1	32.7	49.1	31.9	21	100	37.3	31.1	32.7	21	100	\$400000000000000	5000000000000000	or 64600 01000000	8800 83	8000 00000	less b
IENOL - D6		30.7	100	20.2	23.4	100	20.8	21.2	30,7	20.2	10		23.4	20.8	21.2	10	94				### (\$\)	\$1.330	18848
TROBENZENE - DS		35.8	50	25.0	30.4	50	26.3	27.5	71,7	52.0	35	114	60.7	52.6	55,0	35	114	0000000000000	e2000200000000	000000000000000000000000000000000000000	2000	883. 88800	dassels.
PLUCROBIPHENYL		41.5	50	30.7	34,8	50	32.2	35,3	83.0	61,3	43	116	69.3	64.4	70.5		333 14 53	#\$####			883 (2)	2018	1836
6,6-TRIBROMOPHENOL		106.0	100	103.6	80.2	100	93.9	113,2	106.D	103.6	10	123	80.2	93.9	113.2	10	123	088060300000	0000 2000000000	01:00000000	enska	32 3880)	taste
TERPHENYL - 014	81/98/98	719	60	64.6	36.7	50	67.4	63.7	143.7	129.3	33	141	73.4	114.5	127.4	33	41	100,000,000	300000000000000000000000000000000000000	80900000	380 8	1 0 (8)	38.00 kg

NOTES & DEFINITIONS :

NS = NOT SPIKED

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / 3061 WATERS , FRONT

INSTRUMENT; HP9

SAMPLE ID: NA

EXT'N DATE: 11/12/98

ANALYST; ECL

BLK FUNM: 1374

SMPL FLNM : NA

EXT'N BENCH SHT: V105P03

RUN DATE: 11/13/98

LCS FLNM: 1375

MS FLNM: NA

EXT'N WORK GRP: WG49246 ANAL WORK GRP: WG49308

MSD FLNM: NA

		<u> </u>	CONCE	YTRATI	ON,υp	<u>/</u>			% R	EÇO\	ÆRY					PERCENT		ļ	
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL		Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Adivsory Limits	Blak S	Sample MS
			MAL	RIP						WG.			MAG		M				
ALPHA-BHC	0.05	ИО	0.357	I ND	NA	NA	NA	71.4	37	134	NA	******	******	51	145	NA.	0-43		
BAMMA BHC	0,05	ND:	0.404	i∵ND.	NA:	N.	NA.	8.08	32	127	:NA	*****		54	334	: NA ::	·:: 0-38		: 4
BETA-BHC	0.05	ND	0.447	I ND	NA	NA	NA.	89.4	17	147	NA	*****	******	51	129	NA	0-28		
HERTACHLOR	D.es:	NO :	0.374	⊬ Nb	: NA	NA.	:∷NA∷	74.8	-34	911	NA:			40	39	: NA :::	∴ 6-37		:: 4
DELTA-BHC	0.05	ND	0.473	1 ND	NA	NA	NA	94.6	19	140	NA	*****	******	58	138	NA	0-78	1	
ALORIN	0.00	ND	0.375	[∙ND	NA.	ria.	NA.	75:0	(2	122	NÁ	******	******	25	143	NA	D:88		*
HEPTACHLOR EPOXIDE	0.05	ND	0.429	I ND	NA	NA	NA	85.8	37	142	NA	*****	******	51	135	NA	0-40	j	
GAMMA CHLOROANE	.0.05	ŅĎ	Ň.	I ND	NA.	NA.	NA.	. NA	4\$	119	· ha	Ņ.	NA.	45	115	NA	Q-40		
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	NA.	NA	54	119	NA	NA	NA	45	115	NA	0-17		
ENDOSULFAN (0.05	:NO	0.367	ND:	NA:	. NA	NA:	73.4	15	153	::NA:::	*****	*****	37	123	NA ::	0-22	: ::::	::::∗
4,4-00E	0.10	ND	0.439	I ND	NA	NA	NA.	87.8	30	145	NA	******	*****	64	152	NA	0-23		
DIELDRIN	מו.ם:	NO :	\$81.0	i No∵	: NA	NA.	NA:	92.4	né i	148	'NA'	*****	****	21	171	NA :	0-20		***
ENORIN	0.10	ND	0.461	I ND	NA.	NA	NA.	92.2	30	147	NA	******	*****	56	154	NA	0-28		
A_A-CODIC	Q.1Q	NO	0.470	(·NO	NA.	.NA	NA:	94.0	.3i	141	NA	ENNSTER	******	58.	179	NA	19:30		ii j
ENDOSULFAN N	0.10	ND	0.358	I NO	NA	NA	NA	71.6	D	202	NA	******	*****	21	117	NA	0-18		#
44-00T	:010	NO :	0.479	I NĎ	· NA	NA.	:NA:	95,8	25	160	.∵NA∵	******	******	42	168	NA	0-22		:::•
ENDRIN ALDEHYDE	0.10	ND	0.246	l ND	NA	NA	NA.	49.2	NA	NA	NA	******	*****	21	115	NA	0-40	l	
ENEKISLA FAN SKA FATE	010	NO	0.278	ND:	NÁ	ŇÁ	NA	55.6	26	ţij.	NA:	*****	********	31	117	NA	0-30		***
METHOXYCHLOR	0.50	ND	0.434	I NO	NA	NA	NA.	86.8	NA	NA	NA	******	******	26	196	NA	0-19		
ENDRIN KETONE	מו.ס:	NO :	0.355	Nb	NA.	NA.	. NA	71.0	NA:	ŅĄ.	ŇÁ	******	*****	NA.	W	NA			
Tech-CHLORDANE	1.00	ND	NA	I ND	NA	NA	NA	NA.	45	119	NA	NA	NA .	45	115	NA .	0-40		
TOXAPHENE	1.00	NEI :	NA::	(·:ND;	NA.	NA.	. NA	NA	χij.	126	·NA:	NA :	NA	40	125	NA.	:: 19 .4 0		
SURROGATES								·		二									
G.6-TETRACHLORO-M-XYLENE	1919	0.47	10.2	N/A	NA .	. NA	121	51.2	13		NA:	NA.	NA.	18 .	YKA.				
DECACHLOROBIPHENYL		17.9	17.2		MA	.∵.v.∷ NA	89.4	88.0		140	NA	NA.	NA NA		140				•••••

NOTES & DEFINITIONS:

LCS, MS & MSD uplied at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/L

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL - DILUTED OUT

NO - NOT DETECTED

ROL-REPORTING DETECTION LIMIT



KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / BOST WATERS , REAR

INSTRUMENT: HP9

SAMPLE ID: NA

EXT'N DATE: 11/12/98

ANALYST: ECL

BLK FLNM: 1374

SMPL FLNM: NA

EXT'N BENCH SHT: V105P03

RUN DATE: 11/13/98

LCS FLNM: 1375

MS FLNM : NA

EXT'N WORK GRP: WG49246 ANAL WORK GRP: WG49308

MSD FLNM: NA

	ļ	<u> </u>	CONCE	NTRATI	ON, ug	N.	ļ		% F	RECO\	/ERY					PERCENT		 	
COMPOUND	RDL	Blank	LCS	.Sample	∍ MS	MSD	Blank	LCS		LCS	Sample	e MS	MSD	M\$ LCL		MS/MSD RPD	RPD Advisory Limists	S S	Sample
TOTAL PROPERTY OF THE								us depet pated up a	i i				ipir (ATRAC						mm
ALPHA-8HC	0.05	ND	0.364	I ND	NA	NA	ŅĀ	72,8	37	134	, NA	*****	* ******	51	145	, NA	0-43		
GAMMA-BHC	D.05	NO	0.409	I ND	NA:	NA:	NA .	81.8	32	127	, ŅA	*****	e ennune	\$4	134	. NA	0.18		
BEYA-BHC	0.05	ND	0.423	I ND	NA.	NA.	NA .	84.6	17	147	NA.	*****		51	129	NA.	0-28		# :
HEFTACHLDR	0.05	·ND:	0.381	1.NO	:NA:	NA:	∷ NA ∵	76.2	84;	:144	ŅA:	******	* ******	:40	:189	::NA::::	0:37		
DELTA-BHC	0.05	ND	0.475	I ND	, NA	NA.	, NA	95.0	19	140	NA	*****	******	56	138	NA .	0-78		
ALORIN	:0.05:	No ∶	0.384	(NO:	NA	NA:	NA.	76:8	-2	122	NA:	******	******	20	343	::614.:::;	0-38	3000	1,000
HEPTACHLOR EPOXIDE	0.05	סא	0.443	I NO	NA	NA.	NA	88.6	37	142	NA.	*****	*****	51	135	NA.	0-40		# # .*.*.*.*.
GAMMA-CHUQFEANE	:0.05	: NO:) NO	NA?	NA:	DOMESTIC	(NA)	*5	139	: NA	: NA:	NA :	45	115	::NA::::	0.40		
ALPHA-CHLORDANE	0.05	ND	v differ	I ND	NA.	NA.	NA NA	NA	54	119	NA.	NA.	NA V	45	115	NA.	0-17	1,,,,,,	2232
ENDOSULFAN	0.05	-NO.	0.374		, NA	ŅA;	(A.NA	∴ 75.6	45	153	.∵.ŅA. :			3,7	123	ŅĀ:	0.22		-:-
4,4-DDE	0.10	ND	0.479	. * . * . * . * . * .	NA 	NA 	NA	95,8	30	145	NA .	******	******	64	152	NA .	0-23	(3:45)	
CONTRACTOR CONTRACTOR	0.10	·ND:	(-0.489)		: NA:	::{NA:·	:::NA	97:8: 86.8	:86:	146	∵NA : NA	*******		23 56	(7.1	NA:	0-28 0-28	10000	(i) Pije L
4.4-00D	0.10	ND No	0.434	I ND	NA NA	NA.	NA NA	94.4	30 31	: 141	NA:	*******		58	154 179	isia:	0-30		
ENDOSULFAN II	0.10	ND	0.363	I ND	NA.	NA.	NA NA	72.6	D }idi∵	202	NA		*****	21	117	NA.	0-18		
2,000,000,741,111	0.10	. NO	0.489	********	NA:	NA:	NA.	97.8	25	160	NA.		*****	1.7.	168	NA :	0 22	****	
ENDRIN ALDEHYDE	0.10	ND	0.264	I ND	∵.γγ.∵ NA	NA	NA	52.8	NA.	NA.	NA.	*********	#######	21	115	NA	0-40		# #
ENDOSOLFAN SULFATE	gig	NO:	0.298	201000	NA.	NA:	NÁ.	59.6	26	144	. NA	*****		31	117	NA	0.30		* *
METHOXYCHLOR	0.10	ND	0.477		NA.	NA.	NA.	95	NA	NA	NA.	*****	******	26	196	NA.	0-19		# #
ENDRIN KETONE	0.50	ND	0.377		NA:	NA:	NA .	75	NA:	ŇÁ:	· NA	******	******	NA:	NA	NA:		:::::::	
Yech-CHLORDANE	1.0	ND	NA	I ND	NA	NA	NA	NA.	45	119	NA	NA	NA.	45	115	NA	0-40		
TOXAPHENE	J.Ď	Ŋġ	ΝÀ	i NO	ŃΑ	NA	NA.	NA .	31	126	ŅĄ	NA	ŃΆ	iò	125	fi)k	o 40		
SURROGATES																			
0000 <u>011288</u> 0011	33333		4333		·	i Na		and of			NÁ.	· · · NA · ·		13		1000000		::::::::	
DECACHLOROBIPHENYL	40000	9 (18) 19,4		Z:(ŅA;) L.NA	∵NA∵ NA	NA;	96.8	58.2 94.0	25	.154 140	NA NA	· NA	.;:ŅĀ;; NA		140	,,,,,,,,,,,,,,,,			','.'.'.'

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/L

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DT = DITFILED ON.

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

INSTRUMENT: HP10

SMPL ID: 11-223-01

EXT'N DATE: 11/12/98

ANALYST: CDB

SMPL FLNM: 020F0101

EXT'N BENCH SHT: V105P04

RUN DATE: 11/13/98

BLK FLNM: 018F0101 LCS FLNM: 017F0101

MS FLNM: 021F0101

EXT'N WORK GRP: WG49247

ANAL WORK GRP: WG49301

LCS Dup FLNM: NA

MSD FLNM: 022F0101

			CONCENT	RATION, L	10/L				% R	ECOV	ERY						PERCENT					
COMPOUND	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Sea	<u>හ</u>	Sample	MS WS	WSD
AROCLOR 1016 AROCLOR 1221 AROCLOR 1232	0.5 0.5 0.5	ND NO ND	2.56 NA NA	ND ND ND	5.56 NA NA	5.24 NA NA	NA NA NA	102 NA NA	48 NA NA	125 NA NA	NA NA NA	106 NA NA	100 NA NA	48 NA NA	125 NA NA	6.0 NA NA	NA NA NA					
AROCLOR 1242 AROCLOR 1248 AROCLOR 1254	0.5 0.5 1.0	ND ND ND	NA NA NA	ND ND ND	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA NA	NA NA 0-40					
AROCLOR 1260 SURROGATES	1.0	ND	2,39	ND	5.16	5,19	NA .	95.8	59	122	NA .	96.2	98.9	59	122	0.7	NA .					
2.4.5.8-TETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		0.113 0.164	0.146 0.171	0.185 0.172	0.341 0.369	9 <i>.277</i> 0.376	56.5 82.0	73.0 85.5	13 25	154 140	84.1 78.2	81.2 87.9	66.0 89.5	13 25	154 140							

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at .25 ug/kg SURROGATES spiked at .0200 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

ILCS=LABORATORY CONTROL SAMPLE

IMS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE



ANAL WORK GRP: WG49371

EXT DATE: 11/11/98

RUN DATE: 11/13/98

INSTRUMENT: HPMS7
ANALYST: MLS

METHOD: 8270 MATRIX: WATER BENCH SHEET: V104P99 BLK FLNM: 6456 LCS FLNM: 6457 SMPL ID: L9611209-01 WATER SMPL FLNM: 6460

MS FLNM: 6461 MS FLNM: 6461 MSD FLNM: 6462

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG49216

				CONCE	NTRATION	ug/L			PERCENT RECOVERY , %									PERCE	σ		BEYO!		
ANALYTE	ROL	BLANK	LCS SPIKE ADDED	LCS_	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	ics UCL	SAMPLE	MS	MSD	MSICL		MSD RPD	RPO UCL	RPD >	SAMPLE	¥ 8	SN CSN
PYRIDINE	5.0	ND	100	13.4	ND	100	4.1	6.3	NA MA	13.4	5	150	NA *************	4,1	5.3	5	150	26 ∷∞∞2∷∞	40	00000000000000000	2223	88800000	L
N-NITROSCIDIMETHYLAMINE	80	₩ N D	100	27.5	NO	100	28.6	27.6	NA.	27,5		150	NA	25.5	27.6	5 5	150 150	2	40 40	Transcription	2267812	2000 2000	\$5555 CO.
ANILINE	10.0	ND	100	20.3	ND	100 ***********************************	19.6	19.2	NA 20012190000	20.3	5 ∞∞∞0000	150	NA	19.6 20.0	19.2 20.3	5	112	8886	40			w.ko	88 8
PHENOL	6.0	ND	100	19.4	. ND	100	20.0	20.3	NA.	19.4	5 12	112 158	NA NA	43.2	46.D	12	158	6 6	****** *** ***** 40	* 00000000000	510000 A	2008-1000000	23040010000
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	43.5	ND	100	43.2	46.0	NA NA	43.5	to the of statement of	134	NA.	45.8	48.6	23	134	an in the same	- ¥0	100000	383		1803 180
2 CHLOROPHENOL	6,0	SMD S	100	46.0	ND	100	46.8	44.6 45.5	NA	46.0 40.5	23 5	172	NA	44.3	45.5	5	172	3	40	***********	~~~~~~		
1,3-DICHLOROBENZENE	5.0	ND	100	40.5	ND ND	100	44.3	a a granda di Tabiba ya	i Na	34	20	124		47.2	48.7	20	124	¥ 3	¥0		200		
1,4-DICHLOROBENZENE	10.0	ND.	100		ND ND	100	47.2 41.3	48.7 40.0	NA	36.8	50.80 411 00000	150	NA	(2000.000.000 41.3	40.0	5	150	3	40	4000000000 V	******		The state of the s
BENZYL ALCOHOL	5.0	ND	100	36,8	ND	100	46.1	48.0	NA	31	32	129	NA.	46 1	48.D	32	129		40				
1.2-DICHLOROBENZENE	× 5.0 %	ND	100	43.1 46.5	ND	100	48.5	50.4	NA	46.5	∞∞∞ ,••• ∞∞. 5	150	NA	48.8	50.4	5	150	3	40	700000.000		1	
2-METHYLPHENOL BIS(2-CHLOROISOPROPYL)ETHER	5.0	ND ND	100	12.0	ND	100	42.8	45.3	NA .	42.0	36	156	NA.	42.8	46.3	36	166	6	40	188788			
3- & 4-METHYLPHENOL	6.0 5.0	ND	100	43.8	ND	100	46.3	48.9	NA	43.B	50000000000000000000000000000000000000	150	NA	48.3	48.9	5	150	5	40	1			1
N-NITROSO-OFN-PROPYLAMINE	and the second	NO	100	49.7	ND	100	51,2	54.0	NA	49.7		230	NA	51.2	54.0		230	. 5	40				
HEXACHLOROETHANE	5.0	ND	100	<i>∞∞∞≖</i> (∓∞∞ 41.9	ND	100	43.5	45.3	NA	41.9	40	113	NA.	43.5	45.3	40	113	4	40				
NITROBENZENE	5.0	ND	100	48.9	NÕ.	100	50.5	53.6	NA .	49.9	36	180	NA.	60.6	63,6	35	180	8	40				
ISOPHORONE	5.0	ND	100	54.7	ND	100	57.0	60.1	NA	54.7	21	196	NA.	57.0	60.1	21	196	5	40	1			Il
2-HITROPHEHOL	30	ND.	100	48.5	NO	100	48.9	52.2	NA.	48.6	29	152	NA	48.9	52.2	29	182	6	40				
2.4-DIMETHYLPHENOL	5.0	ND	100	55.3	ND	100	58.5	63.5	NA.	55.3	32	119	NA	58.5	63.5	32	119	8	40	ł			
BIS(2 CHI OROETHOXY)METHANE	25.Q	No	100	46.B	NO	100	49.4	82.1	NA	46.9	33	184	NA	49.4	52.1	33	184	6	40		888. A	% & d	
BENZOIC ACID	5.0	ND	100	11.1	ND	100	23.6	22.4	NA	11.1	5	150	NA	23.6	22.4	5	150	5	40				
2,4-DICHLOROPHENOL	5.0	ND .	100	\$1.7	ND.	100	55.5	59.7	NA	51.7	39	135	. NA	55.5	59.7	39	135		40				
1,2,4-TRICHLOROBENZENE	5.0	ND	100	45.0	ND	100	48.4	50.1	NA	45.D	44	142	NA	48.4	50.1	44	142	4	40				kanan seces
NAPHTHALENE	5.0	ND	100	51.6	ND	100	54.4	56.3	NA .	51.6	21	183	NA .	54.4	56,3	21	133	4	40				
4-CHLOROANILINE	5.0	ND	100	35.5	ND	100	45.8	41.9	NA	35.5	5	150	NA .	45.8	41.9	5	150	9	40				
HEXACHLOROBUTADIENE	10.0	HĎ	100	44.7	ND	100	49.4	51.7	NA	44.7	24	116	NA	49.4	51.7	24	116	5	40	 			
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	69.9	ND	100	70.7	88.7	NA	69.9	22	147	NA	70.7	88.7	22	147	23	40		4450C N		500000 0000
Z-METHYLNAPHTHALENE	5.0	ďи	100	62.1	ND W	100	55.6	68.8	N4	62 1°		150	NA	55.6	58.8		150	6	40				#8 800
HEXACHLOROCYCLOPENTADIEN	6.0	ND	100	30.3	ND	100	12.5	13.2	NA	30.3	5	150	NA	12.5	13.2	5	150	6	40	lamanata	20000	00010000	lance ones
24.6-TRICHLOROPHENOL	25.D	ND	100	81.0	ND	100	65.2	82.5	NA	52.0	37	144	NA	842	52.5	3/4		. 23	40		333	330 SS(6)	888 88
2,4,5-TRICHLOROPHENOL	5.0	ND	100	78.4	ND	100	78.5	97.4	NA	78,4	5	150	NA .	78.5	97.4	5	150	21	40		200000180	000000	12:250 1350
2-CHLORONAPHTHALENE	25.0	ND	100	52.6	ND	100	56.8	52.2	NA	52.8	60	118	NA	55.8	622	80	118	9	40	 			3488 (38)
2-NITROANILINE	5.0	ND	100	58.7	ND	100	56.1	71.7	NA	58.7	5	150	NA	55.1	71.7	5	150	24	40	1		880 8880	becalas
DIMETHYLPHYTHALATE	80	ND	100	73.2	ND	100	67.6	90,3	NA	73.2		112	NA.	67.8	90.3		112	39	40		3033	(S) (S) (S)	2000 BES
ACENAPHTHYLENE	5.0	ND	100	60.0	ND	100	62.0	74.3	NA.	60.0	33	145	NA .	62.0	74.3	33	145	18	40	20000000000	52223	83. S	kazalasa
Z 6-DINITROTOLUENE	5.0	ND	100	74.	NŌ	100	67.7	90.2	NA.	74.4	60	158	NA .	87.7	90.2	60	168	28	40	#	8888		800 1 000
3-NITROANILINE	25.0	ND	100	56.3	ND	100	68.3	68.7	NA	56.3	5	150	NA.	68.3	68.7	5	150	1 38360240500	40	0,000000000000	2000	888 1980an	00000
ACZENAPHITHENE	6.0	ND	100	58.7	ND	100	60.7	73.7	NA.	55.7		145	NA.	60.7	74.7		145	33. 19 .33	40	B:0000000000	800 S	000 00000	200000000
2.4-DINITROPHENOL	25.0	ND	100	86.7	ND	100	79.2	92.7	NA .	86.7	5	191	NA September 1 de constante de	79.2	92.7	5 8000000000	191	1 6	40 ((((((((((((((((((((((((((((((((((((bs000000000000000000000000000000000000	30000	::::!::::::!	188888
4-NITROPHENOL	25.0	ND	100	40.3	NO	100	38.3	43.8	NA	40.3	s	122		34.3	43.8		132	13					para 2006
DIBENZOFURAN	5.0	ND	100	65,5	ND	100	66.0	83.1	NA.	65.5	5	150	NA 	66.0	83.1	5	150	23	40 ********	1000000000	2000	3000 00000	lesses esse
2.4-DINITROTOLUENE	800	ND	100	97.8	ND	100	846	104.9	NA	97.5	39	139	NA	84.6	104.9	39	139	71	40	f/880/1885/78	2000	Sec. (288)	AND DESCRIPTION

NOTES & DEFINITIONS:
NA = NOT APPLICABLE
ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED L= below QC limit H=sbove QC limit

WG49371.XL8

Workgroup #: WG49590

Units:

Method: 8260A

ug/L

Run Date: 11/19/98

LCS2 FLNM: NA LCS DF:

Matrix: Water Instrument ID: HPMS 9 BLK FLNM: 9BK00354

SMPL Num: 11-071-02 SMPL FLNM: 9BR00360

SMPL DF: 10 MS DF: 10

LC

NA

BLK2 FLNM:

MS FLNM: 9BR00361

MSD DF: 10

						-	_		-
cs	FLNM:	9QC00355	MSD	FLNM:	96	BRQ	ю	3	6

		 			С	ONCENTRA	TION, PP	В						PERC	ENT REC	OVERY			PERCEN	NT I
	l	1				LCS Spike				MS Spike			LCS	LCS			Ms	MS	MS	
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Lavel	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	96	%		%	%	%	%	96	%	_
chlorodifluoromethane	10.0	ND	ND	16.0	. NA	20.0	ND	10.9	14.8	20.0	80.0	NA 8	38.0	148.0	54.3	74.0	60.0	140.0		- A
chloromethane	10.0	ND	ND	17.2	NA	20.0	ND	15.5	16.8	20.0	86.0	NA	56.0	132.0	77.7	84.0	ര്ഗ	(2004) - A(20)	30.7	
vinyi chloride	10.0	ND	ND.	20.9	NA	20.0	- ND	. 17.8	20.6	20.0	104.5	NA :	68,0	125.0	88.0	5 44 S F F F S	S. S. S.	273.0	7.9	1;.
bromomethane	10,0	ND	ND	26.4	NA	20.0	ND	22.8	24.0	20.0	132.0	NA NA	55.0	138.0		103.1	··· D	251.0	15.8	.:
chloroethane	10.0	ND	ND	21.1		20.0	ND	17.7	18.5	20.0	105.5	NA .	57.0	128.0	114.0	119.8	0% V 296	242.0	5.0	4,7,
ichlorofluoromethane	10,0	ND	ND	22.0	NA	20.0	ND	16.4	19.0	20.0	110.0	: UMP⊲©, NA	70.0	127.0	88,7 81.8	92.5 94.9	14.0 17.0	230.0	3.4.2	110
freon 113	NTC	ND	ND	NA	NA	20.0	ND :	NA	, NA	20.0	NA.	NA	NA .	NA NA	NA	NA	es à milian	181.0	14.8	333
acetone	100.0	ND	ND	19.2	NA	20.0	NO	19.3	19.1	20.0	96.0	NA	44.0	114.0	96.5	95.4	70.0	130.0	NA	. 10
1,1-dichloroethene	5.0	ND	ND O	21.3	NA	20.0	ND.	16.7	18.4	20.0	106.5	NA S	69.0	144.0	83.3	20001115 0100240	70.0	130.0	1.2	137
iodomethane	NTC	ND	ND	18.4	NA	20.0	ND	16.4	19.3	20.0	92.0	NA	NA	OR CONTRACTOR		92.1	D	234.0	10.1	
methylene chloride	5.0	ND	ND	22.0	NA	20.0	ND	20.3	20.6	20.0	110.0	NA S	71,0	NA 128.0	82.2	96.4	70.0	130.0	15.9	Jw.;
carbon disulfide	5.0	ND	ND	21.0	NA	20.0	ND	18.1	18.7	20.0	105.0	OTOSO NA	67.0	136.0	101.5	103.2	0	221.0	1.6	
acrylonitrile	NTC	ND	ND	NA	NA .	20.0	ND	NA 🌣	NA	20.0	NA	NA 3	NA	aren i artuara	90.6	93.6	70.0	130.0	3.2	Mo
ns-1,2-dichloroethene	5.0	ND	ND	23.1	NA	20.0	ND	20.1	21.0	20.0	115.5	NA	85.0	NA ®	NA S	NA	70.0	130,0	NA S	
vinyl acetate	10.0	ND	ND	25.5	NA	20.0	ND	24.4	A 7777 4 4	20.0	127.5	evita a appa	stroma kovs	133.0	100.5	104.8	54.0	156.0	4.2 80.00.1000	2.70
1,1-dichloroethane	5.0	ND	ND	22.3	NA	20.0	ND	20.4	25.7 20.6	20.0	111.5	NA NA	9.0	236.0	122.2	128.3	9.0	236.0	4.9	
2-butanone	1,00,0	ND	ND	20.9	NA S	20.0	ND		20.2	20.0	104.5	981 - Y X 243	82.0	124.0	102.0	102.8	59.0	155.0	0.8	
2. 2-dichloropropane	5.0	ND	ND	21.3	NA	20.0	ND	17.9	18.4	20.0	104.5	NA	43.0	140.0	99.2	100.8	70.0	130.0	1.6	
-1,2-dichloroethene	5.0	ND	ND	20.B	NA	20.0	ND	19.6	19.4		- 500	NA Karasas	77.0	126.0	89.4	92.0	60.0	140.0	2.9 88 30 18 4 4	200
chloroform	5.0	ND	ND	22.2	NA	20.0	ND	21.0	21.2	20.0	104.0 ·	NA	69,0 83.0	130.0 121.0	97.8 104.9	97.0 105.8	60,0 51,0	140.0 138.0	0,B	×

RDL = Reporting Detection Limit

BLK = Method Blank

ND = Not Detected NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

KENTUN ENVIKUNMENTAL SERVICES - OVL VOLUTILE QUALITY CONTROL SUMMARY

Page 2 of 4 M8260A 111998W.XLS

Workgroup #: WG49590

Method: 8260A Run Date: 11/19/98

LCS2 FLNM: NA LCS DF:

Matrix:

Water

Instrument ID: HPMS_9

SMPL Num: 11-071-02

SMPL DF: 10

Units:

ug/L

BLK FLNM: 9BK00354

SMPL FLNM: 9BR00360

MS DF:

BLK2 FLNM:

MS FLNM: 9BR00361

10

LCS FLNM: 9QC00355

MSD DF:

MSD FLNM:	9BR00362
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	ľ	 			C	ONCENTRA	ATION, PPI	В						PERCE	NT REC	OVERY	-		PERCEI	MT P
•	 					LCS Spike)		-	MS Spike	<u> </u>		LCS	LCS			MS	MS	MS	R
Taxant Amelian	ADL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	- %	%	%	%	%	%	%	%		U
bromochloromethana	5.0	ND	ND	23.4	NA	20.0	ND	22.1	22.4	20.0	117.0	NA	85.0	118.0	110.7	112.2	60.0		%	
1,1,1-trichloroethane	5.0	ND	ND	21.7	NA -	20.0	- ND	17,8	19.1	20.0	108.5	NA NA	74.0	125.0°	89.2	viusuri Telemen	Rad Strategy	140.0	1.3	2 وقارت
1,1-dichloropropene	5.0	ND	ND	22.4	NA	20.0	ND	18.3	19.7	20.0	112.0	NA NA	85.0	126.0	91.4	95.4	52,0	162.0	6.7	2
carbon tetrachloride	5.0	ND	ND	22.8	NA .	20.0	ND .	18.2	20.2	20.0	114.0	NA .	73.0			98.5	60.0	140.0	7.5	2
1.2-dichloroethana	5.0	ND	ND	22.3	NA	20.0	ND	21.4	21.1	20.0	111.5	⊝ NA NA		129.0	91.0	101.1	70,0	140.0	10.6	2
benzene	5.0	ND	NO	22.1	. NA	20.0	ND	19.9	19.7	20.0	110.5	44	76.0	123.0	106.8	105.7	49.0	155.0	1.0	2
trich oroethene	5.0	ND	ND	21,3	NA	20.0	ND	18.2	18.8	20.0	106.5	NA:		ິ 118.0∄	∵99. 4 ⊖	98.6	37,0	151.0	0.8	2
1.2-dichloropropane	5.0	ND	ND	21.2	NA	20.0	ND	: 20 O	19,9			NA ·	82.0	1 20.0	91.2	94.0	71.0	157.0	3.0	
bromodichloromethane	5.0	ND	ND	23.4	NA	20.0	ND	21.8		20.0	106.0	NA	74.0	128.0	99.9	99,3	P	210.0	0.6	. 2
dibrornomethane	5.0	ND	ND	23.3	NA "	20.0	ND	,	22.3	20.0	117.0	NA	74.0	126.0	109.0	111.5	35.0	155.0	2.2	2
2-chloroethylvinyl-ether	10,0	ND	ND	17.1	NA NA	20.0	ND	21.9	22.1	20.0	116.5	NA.	78,0	125.0	109.6	1.10.4	60.0	140.0	6,0,8	. 2
4-methyl-2-pentanone	10.0	ND.	ND	21.2	NA.		_	8.8	4.5	20.0	85.5	NA	50.0	151.0	44.2	22.5	70.0	130.0	65.3	2
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA NA	20.0	ND	17.9	18.2	20.0	106.0	, NA	79.0	127.0	89.3	.91,1	70.0	130,0	2.0	2
toluene	5,0	ND	OD S	21.0	add there are a	20.0	ND	21.0	20.9	20.0	108.0	NA	77.0	123.0	104.8	104.4	D	227.0	0.3	2
ans-1,3-dichloropropens	5.0	ND	ND	ar 70000 (000)	MA	20.0	ND	19.2	19.0	20.0	105.0	: NA	83.0	119.0	96.2	95,0	47.0	150.0	1.3	. 2
1,1,2-trichloruethane	5.0	steedering process	opetining weepship	19.3	NA	20.0	ND See the see	18.2	18.0	20.0	96.5	NA	74.0	124.0	91.0	89.8	17.0	183.0	1.3	2
2. November 2002 11 September 340/2007 35 195 343 343 35	435,4866,40643555455	ND	ND	21.4	NA	20.0	ND	20.2	19.9	20.0	107,0	NA	72.0	119,0	100.8	99.5	52.0	150.0	1.3	20
2-hexanone	10.0	ND	ND	18.7	NA	20.0	ND	17.0	17.8	20.0	93.5	NA	55.0	114.0	84.8	89.2	70.0	130.0	5.1	ःः 21
1,3-dichioropropane	5.0	ND	ND	20.7	NA	20.0	ND	20.0	19,8	20.0	103.5	NA	73.0	ar verstampter	100.0	depotes a recogniza	2014 Production 2005	2012010000000 P	Darier beram	90
tetrachioroethene	5.0	ND	ND	20.4	NA	20.0	ND	17.4	18.3			an shi baran da i	Commence of the second	ngere chart	W. D. A. J. M.	98.9	60.0	140.0	J.2	. 20
ibromochloromethane	5.0	ND	ND:	19.6	NA	20.0		19.2	10.3	20.0	102.0	NA	82.0	120.0	87.1	91.4	64.0	148.0	4.8	20

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

Workgroup #: WG49590

Run Date: 11/19/98

LCS2 FLNM:

NA

LCS DF:

Method:

8260A

Instrument ID: HPMS_9

SMPL Num: 11-071-02

SMPL DF: 10

Matrix: Water Units:

BLK FLNM: 9BK00354

SMPL FLNM: 9BR00360

MS DF: 10

ug/L BLK2 FLNM: NA

MS FLNM: 9BR00361

MSD DF: 10

LCS FLNM: 9QC00355

MSD FLNM: 9BR00362

		L			CC	NCENTRA	TION, PPB							PERC	ENT REC	11/EDV	*		PERCE	IT ODD
						LCS Spike	·		· · · · · ·	MS Spike			LCS	LCS		L111	MS	MS	MS	RPD
,	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	<u></u> %		%	%	%	%	96	%	%
1,2-dibromoethane	5.0	ND	ND	21.1	NA	20.0	ND	20.1	20.1	20.0	105.5	NA.	75.0	121.0	100.3	100.4	60.0	140.0	0.1	20.0
chlorobenzene	5.0	ND	ND	21.3	NA	20.0	ND	19,9	19.5	20.0	106.5	NA.	83.0	120.0	99.4	97.5	37.0	160.0	8828 P 1979	Nagrada di
1,1,1,2-tetrachloroethane	5.0	ND	ND	20.9	NA	20.0	ND	20.2	20.1	20.0	104.5	NA NA	79.0	118.0	101.1	100.3	60.0	140.0	0.8	20.0 20.0
ethylbenzane	5.0	ND	ND .	20.9	NA .	20.0	ND	18.8	18.9	20.0	104.5	NA.	82.0	119.0	94.0	94.5	37.0	162.0	0.5	20.0
m + p-xylene	5.0	ND	ND	41.6	NA	40.0	ND	37.7	37.4	40.0	104.0	NA.	81.0	121.0	94.1	93.5	60.0	140.0	0.7	20.0
o-xylene	5.0	ND	ND	21.3	NA NA	20,0	ND	19.3	19.4	20.0	106.5	NA .	81.0	199.0	96.7	97.1	60.0	140.0	·· 0.4	20.0
atyrene .	5.0	ND	ND	21.4	NA	20.0	МD	20.5	20.3	20.0	107.0	NA	81.0	118.0	102.4	101.4	60.0	140.0	0.9	20.0
bromoform	5.0	ND	ND	18.4	NA 🧆	20.0	ND	18.3	17.3	20.0	92.0	NA S	68.0	129.0	91.4	86.4	45.0	169.0	5.6	20,0
isopropylbenzene	5.0	ND	ND	20.9	NA	20.0	ND	18.3	18.4	20.0	104.5	NA	%	121.0	91.4	92.1	60.0	140.0	0.8	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	22.0	NA	20.0	ND	20.7	19.7	20.0	110.0	NA	61.0	137.0	103.4	98.4	46.0	157.0	5.0	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.8	NA	20.0	ND	19.9	20.4	20.0	109.0	NA	72.0	130.0	99.7	102.1	60.0	140.0	2.4	20.0
trans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA .	20.0	ND	NA S	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA.	NA NA	20.0
propyl-benzene	5.0	ND	ND	19.5	NA	20,0	NO	17.3	17.7	20.0	97.5	NA	69.0	135.0	86.3	88.7	60.0	140.0	2.7	20.0
bromobenzene	5.0	ND	ND	19.6	NA	20.0	ND	19.6	19.1	20.0	98.0	NA 2	86.0	118.0	98.1	95.3	60.0	140.0	2.9	300000000000000000000000000000000000000
1,3,5-trimethylbenzene	5.0	ND	ND	19,4	NA	20.0	ND	17.8	17.6	20.0	97.0	⇔⊕⊕⇔ NA	83.0	121.0	89.0	87.9	60.0	140.0	1.2	20.0 20.0
2-chlorotoluene	5.0	ND.	ND	19.4	NA	20.0	ND	18.4	17.1	20.0	97.0	NA	80.0	126.0	91.9	85.5	60.0	140.0	7.2	20,0
4-chlorotoluene	5.0	ND	ND	19.1	NA	20.0	(H. (C . p. A) ND	18.8	19.5	20.0	95.5	SSUTSS NA	80.0	125.0	93.9	97.6	60.0	140.0	3.9	20.0
tert-butyl-benzens	5.0	ND	ND	19.2	NA	20.0	ND	15.4	15,9	20.0	96.0	TNA**	79.0	114.0	77.2	79.3	60.0	140.0	2.7	20.0
1,2,4-trimethylbenzene	5.0	ND	ND	19.4	NA	20.0	ND	18.4	18.4	20.0	97.0	÷⊎''Ω'⊹∖ NA	84.0	121.0	92.0	් ී ී ි 92.2	60.0	140.0	0.2	
sec-butyl-benzene	5.0	ND	ND	18.8	NA	20.0	ND Ö	16.2	16.7	20.0	94.0	NA C	er energ	122.0	80.8	83.4	60.0	140.0	3.1	20.0 20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Per

8260

Workgroup #: WG49590

Method: 8260A

Run Date: 11/19/98

LCS2 FLNM: NA LCS DF:

Instrument ID: HPMS 9

SMPL Num: 11-071-02

SMPL DF: 10

Matrix:

Water

BLK FLNM: 9BK00354

10

Units:

ug/L

SMPL FLNM: 98R00360

MS DF: 10

BLK2 FLNM:

MS FLNM: 9BR00361

MSD DF:

LCS FLNM: 90C00355

MSD FLNM: 9BR00362

					C	ONCENTRA	TION, PPB						***************************************	PERC	ENT REC	OVERY			PERCEN	IT RPD
						LCS Spike)			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	ŲCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isaprapyl-taluene	5.0	ND	ND	18.5	NA	20,0	ND	16.6	17.0	20.0	92.5	NA	80.0	119.0	83.0	84.8	60.0	140.0	2.1	20.0
1,3-dichlorobenzene	5.0	ND	МD	19.3	NA	20.0	ND	18.8	18.5	20.0	96.5	NA	85.0	119.0	94.2	92.6	60.0	140.0	1.7	20.0
1,4-dichlorobenzene	5.0	ND	ND	19.5	NA	20.0	ND	19.5	18.9	20.0	97.5	NA	82.0	122.0	97.3	94.4	18.0	190.0	3.0	20.0
n-butyl-benzene	5.0	ND	ND	18.2	NA	20.0	ND	16.8	17.3	20,0	96.0	NA	80.0	1 25:0	84.2	86.3	gwir Riwryt	140.0	nagywy katalysi	20.0
1,2-dichlorobenzene	5.0	ND	ND	21.1	NA	20.0	ND	19.9	19.4	20.0	105.5	NA	86.0	119.0	99.6	96.9	19.0	190.0	2.7	20.0
1,2-dibromo-3-chloroproparia	5.0	ND	ND	17,9	NA	20.0	ND	15.8	16.2	20.0	89.5	NA.	66.0	134.0	gagas i kritarejas	80.9	8,8 2001.00	140.0	2.6	20.0
1,2,4-trichlorobenzene	5.0	ND	ND	18.6	NA	20.0	ND	18.0	17.8	20.0	93.0	NA	78.0	122.0	90.0	89.1	60.0	140.0	1.0	20.0
hexachlorobutadiene	5.0	ND	ND	17.2	NA .	20.0	ND	14.6	15.6	20.0	86.0	NA 3	73.0	125.0	73.0	77.6	60.0	140.0	6.2	20.0
napthalene	10.0	ND	ND	∍ meeme. 19.3	NA	20.0	ND	18,4	18.1	20,0	96.5	NA.	74.0	148.0	91.9	90.5	60.0	140.0	1.5	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.5	NA	20.0	essential de la compa	17.8	17.1	20.0	92.5	NA 4	74.0	124.0	s parmiduca	85.7	ggaran kan kana	140.0	905,000,000	20.0

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

NVIRONMENTAL SERVICES	
CHAIN-OF-CUSTODY RECORD	Pag

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Sample #	Analyses	Reason	T			amples	Due Date_	11- 24	Page	350.70
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KEMRON Environmental Services 109 Stablite Park Marietta, Ohio 45750 Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road Columbia, MD 21045-1934

Login #: L9811250
Report Date: 11/25/98
Work ID: PEDRICK TOWN DISPOSAL

Date Received: 11/13/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9811250-01	WEIR 1112/COMP	L9811250-02	WEIR 1112/GRAB
L9811250-03	WEIR 1111/COMP	L9811250-04	WEIR 1110/COMP
L9811250-05	MIX 1112/GRAB	L9811250-06	BG 1112/GRAB

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Dennis S. Tepe



Login #L9811250 November 25, 1998 02:07 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811250-01 Client Sample ID: WEIR 1112/COMP Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Collected: 11/12/98 1200 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	19	· · · · · · · · · · · · · · · · · · ·	5.0	1	N/A	DLP	11/16/98	13:30	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-01 Client Sample ID: WEIR 1112/COMP Site/Work ID: PEDRICK TOWN DISPOSAL Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/12/98 Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: 11/17/98

Analysis Date: 11/18/98 Time: 11:41

Instrument: HP10

Analyst: CDB Lab File ID: 054R0101 Method: 8082/3550 Run ID: R56467

Batch : WG49492

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1	
SURF	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	52.5 56.5	(13 - 154%) (25 - 140%)			

TCLP Extract Date: N/A

Product: 8081P - Organochlorine Pesticides

Endosulfan sulfate.....

4,4'-DDT....

Endrin aldehyde.....

gamma Chlordane.....

Methoxychlor.....ug/L

Endrin ketone..... ug/L

alpha Chlordane..... ug/L

Lab Sample ID: L9811250-01 Client Sample ID: WEIR 1112/COMP

Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/12/98

% Solid: N/A

0.10

0.10

0.50

0.10

0.10

0.05

0.05

1.0

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Instrument: HP9 Analyst: ECL

ND

ND

ND

ND

Method: 8081A\3510C Run ID: R56548

Extract Date: 11/17/98 Analysis Date: 11/18/98 Time: Lab File ID: 1436 Batch : WG49491 CAS # Compound Units Result Qualifiers RL Dilution 319-84-6 alpha-BHC.... ug/L ND 0.05 1 beta-BHC.... 319-85-7 uq/L ND 0.05 1 319-86-8 delta-BHC.... ug/L ND 0.05 1 58-89-9 gamma-BHC (Lindane).... uq/L ND 0.05 ī 76-44-8 Heptachlor.... ug/L ND 0.05 309-00-2 Aldrin.... ND ug/L 0.05 1024-57-3 Heptachlor epoxide.... ug/L ND 0.05 959-98-8 Endosulfan I.... ug/L ND 0.05 60-57-1 Dieldrin..... ug/L ND 0.10 72-55-9 4,4'-DDE.... ug/L ND 0.10 72-20-8 Endrin.... ug/L ND 0.10 Endosulfan II..... 33213-65-9 ug/L ND 0.10 72-54-8 4,4'-DDD.... uq/L ND 0.10 1031-07-8

8001-35-2	Toxaphene	ug/L	ND
SURR	OGATES- In Percent Recovery:		
	2,4,5,6-Tetrachloro-m-xylene	43.8	(13 - 154%)
	Decachlorobiphenyl	48.2	(25 - 140%)

50-29-3

72-43-5

53494-70-5

7421-93-4

5103-71-9

5103-74-2

Login #L9811250 November 25, 1998 02:07 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9811250-02 Client Sample ID: WEIR 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

% Solid: N/A Date Collected: 11/12/98

Matrix: Water

Method: 8270C\3510C Instrument: HPMS5
Analyst: MDC TCLP Extract Date: N/A Run ID: R56742

Extract Date: 11/13/98 Analysis Date: 11/18/98 Time: 18:58 Batch: WG49409 Lab File ID: 8706

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	11	2.27	
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	11	2.27	
95-57-8	2-Chlorophenol	ug/L	ND	11	2.27	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	11	2.27	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	11	2.27	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	11	2.27	
95-48-7	2-Methylphenol	ug/L	ND	11	2.27	
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	ND	11	2.27	
106-44-5	A_Mothylphenol	ug/L	ND	11	2.27	
621-64-7	4-Methylphenol	ug/L	ND	11	2.27	
67-72-1	Hexachloroethane	ug/L	ND	11	2.27	
98-95-3	Nitrobenzene	ug/L	ND	11	2.27	
78-59-1	Isophorone	ug/L	ND	11	2.27	
,	2-Nitrophenol	ug/L	ND	11	2.27	
88-75-5	2,4-Dimethylphenol	ug/L	ND	11	2.27	
105-67-9	Bis (2-Chloroethoxy) Methane	ug/L	ND	11	2.27	
111-91-1	2,4-Dichlorophenol	ug/L	VD	11	2.27	
120-83-2	1,2,4-Trichlorobenzene	ug/L	ND	11	2.27	
120-82-1	Naphthalene	ug/L	ND	11	2.27	
91-20-3	4-Chloroaniline	ug/L	ND	11	2.27	
106-47-8	4-Chioroaniline	ug/L	ND	11	2.27	
87-68-3	Hexachlorobutadiene	ug/L	ND	11	2.27	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	11	2.27	
91-57-6	2-Methylnaphthalene	ug/L	ND	11	2.27	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	11	2.27	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	57	2.27	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	11	2.27	
91-58-7	2-Chloronaphthalene	ug/L	ND	57	2.27	
88-74-4	2-Nitroaniline	ug/L	ND	11	2.27	
131-11-3	Dimethylphthalate	ug/L	ND	11	2.27	
208-96-8	Acenaphthylene	ug/5	ND	11	2.27	
606-20-2	2,6-Dinitrotoluene	ug/L	, ND	57	2.27	
99-09-2	3-Nitroaniline	ug/L	ND	11	2.27	
83-32-9	Acenaphthene	ug/L	ND	57	2.27	
51-28-5	2,4-Dinitrophenol	ug/L	ND	57	2.27	
100-02-7	4-Nitrophenol	ug/L	ND	11	2.27	
132-64-9	Dibenzofuran	ug/L	ND	11	2.27	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	11	2.27	
84-66-2	Diethylphthalate	ug/L	ND	11	2.27	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	, in the second			

RL = Reporting Limit

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APPRILATION &

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Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-02 Client Sample ID: WEIR 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 18:58

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/12/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS5

Method: 8270C\3510C

Analyst: MDC Lab File ID: 8706 Run ID: R56742 Batch : WG49409

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L	ND	11	2.27
100-01-6	4-Nitroaniline	11~/T	ND	57	2.27
534-52-1	4 E-Dinitro 2 mathrolabanal		ND ND	57	2.27
86-30-6	N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether. Hexachlorobenzene.	ug/L	ND	ĭí	2.27
101 - 55-3	4-Bromophenyl-phenylether.	ug/L	ND	îî	2.27
118-74-1	Hexachlorobenzene	ug/L	ND	11	2.27
87-86-5	Fentachiotophenoi	ug/L	ND	5 <i>7</i>	2.27
85-01-8	Phenanthrene	ug/L	ND	ĭí	2.27
120-12 - 7	Anthracene	ug/L	ND	īī	2.27
86-74 - 8	Carbazole.	ug/L	ND	īī	2.27
84-74-2	Di-N-Butylphthalate	ug/L	ND	11	2.27
206-44-0	Fruoranchene	ug/L	ND	īī	2.27
129-00-0	Pyrene	ug/L	ND	īī	2.27
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine	ug/L	ND	11	2.27
91-94-1	3,3'-Dichlorobenzidine	ug/L	ND	23	2.27
56-55-3	benzo(a) anthracene	ug/L	ND	11	2.27
218-01-9	Chrysenebis(2-Ethylhexyl)phthalate	ug/L	ND	11	2.27
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L	ND	11	2.27
117-84-0	DI-D-OCEVIDDENA!AFA	ug/L	ND	11	2.27
205-99-2	Benzo(b) fluoranthene	ug/L	ND	11	$\frac{1}{2}.\frac{1}{27}$
207-08-9	Benzo(K) fluoranthene	ug/L	ND	11	2.27
50-32-8	Benzo(a) pyrene	ug/L	ND	11	2.27
193-39-5	Indeno(1,2,3-cd)pvrene	ug/L	ND	īī	2.27
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ND	11	2.27
191-24-2	Benzo(g,h,i)Perylene	ug/L	ND	11	2.27
SURR	OGATES- In Percent Recovery:				
	2-Fluorophenol	39.8	(21 - 100%)		
	Phenol-d5	23.9	(10 - 94%)		
	Nitrobenzene-d5	53.7	(35 - 114%)		
	2-Fluorobiphenyl	60.1	(43 - 116%)		
	2-Fluorobiphenyl	99.0	(10 - 123%)		
	p-Terphenyl-d14	116	(33 - 141%)		
	• • • • • • • • • • • • • • • • • • • •		, 33 2220)		

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-02 Client Sample ID: WEIR 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Date Collected: 11/12/98

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A

Extract Date: N/A

Instrument: HPMS2

Dil. Type: N/A COC Info: N/A

Method: 8260B Run ID: R56480

Analysis Date: 11/18/98 Time: 14:52

Analyst: CMS Lab File ID: 2VR27625 Batch : WG49540

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/L		ND	10	1	
74-83-9	Bromomethane	ug/L	•	ND	10	1	
75-014	Vinyl chloride	ug/L		ND	10	1	•
75-00-3	Chloroethane	ug/L		ND	10	1	
75-09-2	Methylene chloride	ug/L		ND	5.0	1	
67-64-1	Acetone	ug/L		ND	10	1	
75-15-0	Carbon disulfide	ug/L		ND	5.0	1	
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1	
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	1	
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	1	
67-66-3	Chloroform	ug/L		ND	5.0	1	
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	1	
78-93-3	2-Butanone	ug/L		ND	10	1	
71-55-6	1,1,1-Trichloroethane	uq/L		ND	5.0	1	
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	1	
75-27-4	Bromodichloromethane	ug/L		ND	5.0	1	
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	1	
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1	
79-016	Trichloroethene	ug/L		ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1	
71-43-2	Benzene	ug/L		ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1	
75-25-2	Bromoform	uq/L		ND	5.0	1	
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1	
591-78-6	2-Hexanone	ug/L		ND	10	1	
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ИD	5.0	1	
108-88-3	Toluene	ug/L		ND	5.0	1	
108-90-7	Chlorobenzene	ug/L		ND	5.0	Ţ	
100-41-4	Ethyl benzene	ug/L		ND	5.0	1	
100-42-5	Styrene	ug/L		ND	5.0	<u> </u>	
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1	
SURR	OGATES- In Percent Recovery:						•
	Dibromofluoromethane	98.2	(86 - 118%)			
	Toluene-d8	102	Ç	88 - 110%)			
	p-Bromofluorobenzene	103	(86 - 115%)			
	1,2-dichloroethane-d4	97.7	(80 - 120%)			

RL - Reporting Limit

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Login #1 1250 November 5, 1998 02:07 pm

KEMRON ENV NMENTAL SERVICES

Lab Sample ID: L9811250-03 Client Sample ID: WEIR 1111/COMP Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water Collected: 11/11/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time M	lethod
Total Suspended Solids	mg/L	19		5.0	1	N/A	DLP	11/16/98	13:30 1	60.2

Lab Sample ID: L9811250-04 Client Sample ID: WEIR 1110/COMP Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water Collected: 11/10/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	D:11	Туре	Analyst	Analysis Date	Time Me	ethod
Total Suspended Solids	mg/L	22		5.0	1	N/A	DLP	11/16/98	13:30 16	50.2

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Collected: 11/12/98 1230

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	63		5.0	1	N/A	DLP	11/16/98	13:30	160.2

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB

Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Date Collected: 11/12/98

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Sample Weight: N/A

Extract Volume: N/A

TCLP Extract Date: N/A

Extract Date: 11/17/98

Analysis Date: 11/18/98 Time: 12:20

Instrument: HP10 Analyst: CDB

Method: 8082/3550 Run ID: R56467

Lab File ID: 055R0101

Batch : WG49492

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.55 0.55 0.55 0.55 0.55 1.1	1.1 1.1 1.1 1.1 1.1 1.1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	37:4 37.7	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/12/98

% Solid: N/A

TCLP Extract Date: N/A

Extract Date: 11/17/98

Analysis Date: 11/18/98 Time:

Instrument: HP9

Method: 8081A\3510C Run ID: R56548

Analyst: ECL Lab File ID: 1437

Batch : WG49491

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-85-7 319-86-8 58-89-9 76-44-8	alpha-BHC. beta-BHC. delta-BHC. gamma-BHC (Lindane) Heptachlor Aldrin Heptachlor epoxide.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.055 0.055 0.055 0.055 0.055 0.055	1.1 1.1 1.1 1.1 1.1 1.1

RL = Reporting Limit

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/12/98

% Solid: N/A

Instrument: HP9
Analyst: ECL
Lab File ID: 1437

Method: 8081A\3510C Run ID: R56548

Batch : WG49491

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
959-98-8 60-57-1 72-55-9 72-20-8 33213-65-9 72-54-8 1031-07-8 50-29-3 72-43-5 53494-70-5	Endosulfan I. Dieldrin. 4,4'-DDE. Endrin. Endosulfan II. 4,4'-DDD. Endosulfan sulfate. 4,4'-DDT. Methoxychlor Endrin ketone.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND ND ND	0.055 0.11 0.11 0.11 0.11 0.11 0.11 0.55	1.1 1.1 1.1 1.1 1.1 1.1 1.1
7421-93-4 5103-71-9 5103-74-2 8001-35-2	Endrin aldehyde alpha Chlordane gamma Chlordane. Toxaphene. OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene. Decachlorobiphenyl	ug/L ug/L ug/L	ND ND ND ND (13 - 154%) (25 - 140%)	0.11 0.055 0.055 1.1	1.1 1.1 1.1 1.1

TCLP Extract Date: N/A

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 19:38

Matrix: Water

Date Collected: 11/12/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS5

Method: 8270C\3510C

Analyst: MDC Lab File ID: 8707 Run ID: R56742 Batch: WG49409

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	ĩŏ	ž
95-57~8	2-Chlorophenol	ug/L	ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2
106-46-7	1,4-Dichlorobenzene	ug/L	ЙD	10	2
95-50-1	1,2-Dichlorobenzene	ug/L	ND	īŏ	2
95-48-7	2-Methylphenol	ug/L	ND	ĩŏ	$\tilde{\mathbf{z}}$
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	ND	10	2
106-44-5	4-Methylphenol	ug/L	ND	ĩŏ	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	īŏ	$\bar{2}$
67-72-1	Hexachloroethane	ug/L	ND	īo	$\bar{2}$
98-95-3	Nitrobenzene	ug/L	ND	īŏ	<u>-</u>
78-59-1	Isophorone	ug/L	ND	īŏ	$\overline{2}$
88-75-5	2-Nitrophenol	ug/L	ND	10	$\overline{2}$
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	$\overline{2}$
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L	ND	10	$\bar{2}$
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	$\overline{2}$
120-82-1	1,2,4-Trichlorobenzene	uq/L	ND	10	$\overline{2}$
91-20-3	Naphthalene	ug/L	ND	10	2
106-47-8	4-Chloroaniline	ug/L	ND	10	2
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2
59-50-7	4-Chloro-3-methylphenol	uq/L	ND	10	2
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2
88-74-4	2-Nitroaniline	ug/L	ND	50	2
131-11-3	Dimethylphthalate	ug/L	ND	10	2
208-96-8	Acenaphthylene	ug/L	ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2
99-09-2	3-Nitroaniline	ug/L	ND	50	2
83-32-9	Acenaphthene	ug/L	ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2
100-02-7	4-Nitrophenol	ug/L	ND	50	2
132-64-9	Dibenzofuran	ug/L	ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2
84-66-2	Diethylphthalate	ug/L	ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2

RL - Reporting Limit

TCLP Extract Date: N/A

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 19:38

Matrix: Water

Date Collected: 11/12/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS5 Analyst: MDC Lab File ID: 8707 Method: 8270C\3510C Run ID: R56742 Batch: WG49409

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
86-73-7	Fluorene	/+				
100-01-6	4-Nitroaniline	ug/L	ND	10	2	
534-52-1	4.6-Dinitro-2-methylphonol	ug/L	ND	50	2	
86-30-6	N-Nitrogodinhenylamine	ug/L	ND	50	2	
101-55-3		ug/L	ND	10	2	
118-74-1	Hevachlorobonaba	ug/L	ND	10	2	
87-86-5	Hexachlorobenzene	ug/L	ND	10	2	
85-01-8		ug/L	ND	50	2	
120-12-7	Phenanthrene.	ug/L	ND	1.0	2	
86-74-8	Anthracene	ug/L	ND	10	$\bar{2}$	
84-74-2	Carbazole.	ug/L	ND	10	ž.	
206-44-0	Di-N-Butylphthalate	ug/L	ND	10	$\bar{2}$	
129-00-0	riuoranthene	ug/L	ND	10	2	
85-68-7			ND	īŏ	2	
03-68-7	Butylbenzylphthalate 3,3'-Dichlorobenzidine Benzo(a)anthracene	ug/L	ND	īŏ	2	
91-94-1	3,3'-Dichlorobenzidine	ug/L	ND	20	5	
56-55-3	Benzo (a) anthracene	ug/L	ND	ĩŏ	້າ	
218-01-9	Chrysene. bis(2-Ethylhexyl)phthalate. Di-n-octylphthalate. Benzo(b)fluoranthene. Benzo(k)fluoranthene	ug/L	ND	ĩŏ	້	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L	ND	10	5	
117-84-0	Di-n-octylphthalate	ug/L	ND	10	້າ	
205-99-2	Benzo (b) fluoranthene	ug/L	ND	10	ž	
207-08-9	Demzo (x/ liuoramene	11Cf / I.	ND	10	5	
50-32-8	Benzo (a) ovrene	1, 2 7,+	ND	10	5	
193-39-5	Indeno(1,2,3-cd)pyrene	uq/L	ND	10	2	
53-70-3	Indeno (1,2,3-cd) pyrene. Dibenzo (a,h) Anthracene.	ug/L	ND	10	4	
191-24-2	Benzo(g,h,i)Perylene	ug/L	ND		2	
		ug/L	אָט	10	2	
SURI	ROGATES- In Percent Recovery:					
	2-Fluorophenol	39.3	/ 21 100%			
	Phenol-d5	22.7	(21 - 100%) (10 - 94%)			
	Nitrobenzene-d5					
	2-Fluorohinhanul	55.7	(35 - 114%)			
	2-Fluorobiphenyl. 2,4,6-Tribromophenol	61.1	(43 - 116%)			
	n-Ternhenvil 414	98.3	(10 - 123%)			
	p-Terphenyl-d14	112	(33 - 141%)			

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-05 Client Sample ID: MIX 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/12/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS2 Method: 8260B Extract Date: N/A Run ID: R56480

Analyst: CMS Lab File ID: 2VR27626 Analysis Date: 11/18/98 Time: 15:30 Batch : WG49540

74-87-3 Chloromethane.	CAS #	Compound	Units	Result Qualifiers	RL o	Dilution
74-83-9 Bromomethane		Chloromethane	ug/L	ND	10	1
75-01-4 Vinyl chloride ug/L ND 10 1 75-09-3 Chloroethane		Bromomethane	ug/L		10	1
75-09-2 Methylene chloride		Vinvl chloride			10	ī
75-09-2	75-00-3	Chloroethane				ī
18		Methylene chloride	ug/L			ī
75-15-0 Carbon disulfide. ug/L ND 5.0 1 75-34-4 1.1-Dichloroethene. ug/L ND 5.0 1 75-34-3 1.1-Dichloroethene. ug/L ND 5.0 1 75-34-3 1.1-Dichloroethene. ug/L ND 5.0 1 740-59-0 1.2-Dichloroethene. ug/L ND 5.0 1 107-06-2 1.2-Dichloroethene. ug/L ND 5.0 1 107-06-2 1.2-Dichloroethene. ug/L ND 5.0 1 78-93-3 2-Butanone. ug/L ND 5.0 1 71-55-6 1.1.1-Trichloroethane ug/L ND 5.0 1 71-55-6 1.1.1-Trichloroethane ug/L ND 5.0 1 75-22-5 Carbon tetrachloride. ug/L ND 5.0 1 75-22-4 Bromodichloromethane ug/L ND 5.0 1 78-87-5 1.2-Dichloropropane. ug/L ND 5.0 1 78-87-5 1.2-Dichloropropane. ug/L ND 5.0 1 10061-01-5 cis-1.3-Dichloropropane. ug/L ND 5.0 1 79-01-6 Trichloroethane ug/L ND 5.0 1 124-48-1 Dibromochloromethane ug/L ND 5.0 1 79-00-5 1.1.2-Trichloroethane ug/L ND 5.0 1 79-00-5 1.1.2-Trichloroethane ug/L ND 5.0 1 79-10-2 Etrans-1.3-Dichloropropene ug/L ND 5.0 1 10061-02-6 trans-1.3-Dichloropropene ug/L ND 5.0 1 79-10-5 1.1.2-Trichloroethane ug/L ND 5.0 1 10061-02-6 trans-1.3-Dichloropropene ug/L ND 5.0 1 79-34-5 Bromoform ug/L ND 5.0 1 10061-02-6 trans-1.3-Dichloropropene ug/L ND 5.0 1 10061-03-6 trans-1.3-Dichloropropene ug/L ND 5.0 1 10061-04-4 Hexthyl-2-pentanone ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1		Acetone	ug/L			ī
75-35-4		Carbon disulfide	ug/L			ï
75-34-3 1,1-Dichloroethane. Ug/L ND 5.0 1 540-59-0 1,2-Dichloroethane (Total) Ug/L ND 5.0 1 67-66-3 Chloroform. Ug/L ND 5.0 1 107-06-2 1,2-Dichloroethane. Ug/L ND 5.0 1 78-93-3 2-Butanone. Ug/L ND 5.0 1 71-55-6 1,1,1-Trichloroethane Ug/L ND 10 1 56-23-5 Carbon tetrachloride Ug/L ND 5.0 1 75-27-4 Bromodichloromethane Ug/L ND 5.0 1 78-87-5 1,2-Dichloropropane. Ug/L ND 5.0 1 10661-01-5 cls-1,3-Dichloropropane. Ug/L ND 5.0 1 79-01-6 Trichloroethane Ug/L ND 5.0 1 124-48-1 Dibromochloromethane Ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane Ug/L ND 5.0 1 79-00-5 1,2-Dichloropropane. Ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloromethane Ug/L ND 5.0 1 79-03-5 Ug/L ND 5.0 1 79-04-8 Benzene. Ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene. Ug/L ND 5.0 1 10061-03-6 Ug/L ND 5.0 1 10061-04-6 Ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone Ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone Ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone Ug/L ND 5.0 1 108-90-7 Chlorobenzene. Ug/L ND 5.0 1 108-90-7 Chlorobenzene. Ug/L ND 5.0 1 108-80-3 Toluene. Ug/L ND 5.0 1 100-41-4 Ethyl benzene Ug/L ND 5.0 1 100-42-5 Styrene. Ug/L ND 5.0 1 100-42-5 Styrene. Ug/L ND 5.0 1 100-62-5 Styrene. Ug/L ND 5.0 1 100-62-5 Styrene. Ug/L ND 5.0 1 100-61-4 Tehyl benzene Ug/L ND 5.0 1 100-61-4 Tehyl benzene Ug/L ND 5.0 1 100-61-5 Therecan Recovery: Dibromofluoromethane. 96.4 {86 - 118\$}		1,1-Dichloroethene	uq/L	ND	5.0	1
\$40-59-0		1,1-Dichloroethane	uq/L	ND	5.0	1
67-66-3 Chloroform		1,2-Dichloroethene (Total)	uq/L	ND	5.0	1
107-06-2		Chloroform	ug/L	ND	5.0	1
78-93-3 2-Butanone. ug/L ND 10 1 71-55-6 1,1,1-Trichloroethane ug/L ND 5.0 1 56-23-5 Carbon tetrachloride. ug/L ND 5.0 1 75-27-4 Bromodichloromethane ug/L ND 5.0 1 78-87-5 1,2-Dichloropropane. ug/L ND 5.0 1 10061-01-5 cis-1,3-Dichloropropene. ug/L ND 5.0 1 79-01-6 Trichloroethane. ug/L ND 5.0 1 124-48-1 Dibromochloromethane. ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane. ug/L ND 5.0 1 79-00-6 trans-1,3-Dichloropropene. ug/L ND 5.0 1 71-43-2 Benzene. ug/L ND 5.0 1 71-43-2 Benzene. ug/L ND 5.0 1 75-25-2 Bromoform. ug/L ND 5.0 1 1061-01-4 4-Methyl-2-pentanone ug/L ND 5.0 1 1591-78-6 2-Hexanone. ug/L ND 5.0 1 127-18-4 Tetrachloroethene. ug/L ND 10 1 127-18-4 Tetrachloroethene. ug/L ND 5.0 1 199-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0 1 108-88-3 Toluene. ug/L ND 5.0 1 108-90-7 Chlorobenzene. ug/L ND 5.0 1 108-90-7 Chlorobenzene. ug/L ND 5.0 1 100-42-5 Styrene. ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 101-184		1,2-Dichloroethane	uq/L	ND	5.0	1
71-55-6 1,1,1-Trichloroethane. ug/L ND 5.0 1 56-23-5 Carbon tetrachloride. ug/L ND 5.0 1 75-27-4 Bromodichloromethane. ug/L ND 5.0 1 78-87-5 1,2-Dichloropropane. ug/L ND 5.0 1 10061-01-5 cis-1,3-Dichloropropane. ug/L ND 5.0 1 79-01-6 Trichloroethene. ug/L ND 5.0 1 124-48-1 Dibromochloromethane. ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane. ug/L ND 5.0 1 71-43-2 Benzene. ug/L ND 5.0 1 71-43-2 Benzene. ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene. ug/L ND 5.0 1 1 75-25-2 Bromoform. ug/L ND 5.0 1 1 08-10-1 4-Methyl-2-pentanone. ug/L ND 5.0 1 1591-78-6 2-Hexanone. ug/L ND 5.0 1 1591-78-6 1-Hexanone. ug/L ND 10 1 1 127-18-4 Tetrachloroethene ug/L ND 10 1 1 127-18-4 Tetrachloroethene ug/L ND 5.0 1 1 108-88-3 Toluene. ug/L ND 5.0 1 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 1 100-42-5 Styrene ug/L ND 5.0 1 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 1 SURROGATES In Percent Recovery:		2-Butanone	ug/L	ND		1
Street		1,1,1-Trichloroethane	uq/L	ND		1
75-27-4 Bromodichloromethane ug/L ND 5.0 1 78-87-5 1,2-Dichloropropane. ug/L ND 5.0 1 10061-01-5 cis-1,3-Dichloropropene. ug/L ND 5.0 1 79-01-6 Trichloroethene. ug/L ND 5.0 1 124-48-1 Dibromochloromethane. ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane. ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane. ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone. ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone. ug/L ND 10 10 1591-78-6 2-Hexanone. ug/L ND 10 1 127-18-4 Tetrachloroethene. ug/L ND 10 1 179-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0 1 108-88-3 Toluene. ug/L ND 5.0 1		Carbon tetrachloride	ug/L	ND		1
10061-01-5		Bromodichloromethane	ug/L			1
10061-01-5		1,2-Dichloropropane	ug/L			1
124-48-1 Dibromochloromethane ug/L ND 5.0 1 79-00-5 1,1,2-Trichloroethane ug/L ND 5.0 1 71-43-2 Benzene ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene ug/L ND 5.0 1 75-25-2 Bromoform ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone ug/L ND 10 1 591-78-6 2-Hexanone ug/L ND 10 1 127-18-6 2-Hexanone ug/L ND 10 1 127-18-6 2-texanone ug/L ND 5.0 1 127-18-4 Tetrachloroethane ug/L ND 5.0 1 108-88-3 Toluene ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0		cis-1,3-Dichloropropene	ug/L			1
79-00-5 1,1,2-Trichloroethane. ug/L ND 5.0 1 71-43-2 Benzene. ug/L ND 5.0 1 10061-02-6 trans-1,3-Dichloropropene. ug/L ND 5.0 1 75-25-2 Bromoform. ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone. ug/L ND 10 1 591-78-6 2-Hexanone. ug/L ND 10 1 127-18-4 Tetrachloroethene. ug/L ND 5.0 1 79-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0 1 108-88-3 Toluene. ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 100-42-5 Styrene. ug/L ND 5.0 1 1330-20-7 Kylenes, Total. ug/L ND 5.0 1 SURROGATES- In Percent Recovery: Dibromofluoromethane. 96.4 (86 - 118%)		Trichloroethene	ug/L			1
71-43-2 Benzene.		Dibromochloromethane	ug/L	<u>-</u> -		1 .
10061-02-6 trans-1,3-Dichloropropene. ug/L ND 5.0 1 75-25-2 Bromoform ug/L ND 5.0 1 108-10-1 4-Methyl-2-pentanone. ug/L ND 10 1 591-78-6 2-Hexanone. ug/L ND 10 1 127-18-4 Tetrachloroethene. ug/L ND 5.0 1 79-34-5 1,1,2,2-Tetrachloroethane. ug/L ND 5.0 1 108-88-3 Toluene. ug/L ND 5.0 1 108-90-7 Chlorobenzene. ug/L ND 5.0 1 100-41-4 Ethyl benzene. ug/L ND 5.0 1 100-42-5 Styrene. ug/L ND 5.0 1 1330-20-7 Xylenes, Total. ug/L ND 5.0 1 SURROGATES- In Percent Recovery: Dibromofluoromethane. 96.4 (86 - 118%)		1,1,2-Trichloroethane	ug/L			1
75-25-2 Bromoform			ug/L			1
75-25-2 Bromoform		trans-1,3-Dichloropropene	ug/L			1
Surrogates		Bromoform	ug/L			1
Surrogates		4-Methyl-2-pentanone	ug/L			1
79-34-5 1,1,2,2-Tetrachloroethane ug/L ND 5.0 1 108-88-3 Toluene ug/L ND 5.0 1 108-90-7 Chlorobenzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 SURROGATES- In Percent Recovery: Dibromofluoromethane. 96.4 (86 - 118%)		2-Hexanone	ug/L		10	Ī
79-34-5 1,1,2,2-Tetrachloroethane.		Tetrachloroethene	ug/L			1
108-90-7 Chlorobenzene ug/L ND 5.0 1 100-41-4 Ethyl benzene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 SURROGATES- In Percent Recovery: Dibromofluoromethane 96.4 (86 - 118%)		1,1,2,2-Tetrachloroethane	ug/L			1
100-41-4 Ethyl benzene ug/L ND 5.0 1 100-42-5 Styrene ug/L ND 5.0 1 1330-20-7 Xylenes, Total ug/L ND 5.0 1 SURROGATES- In Percent Recovery: Dibromofluoromethane 96.4 (86 - 118%)			ug/L			1
100-42-5 Styrene		Chlorobenzene	ug/L			1
1330-20-7 Xylenes, Total		Ethyl benzene	ug/L			1
SURROGATES- In Percent Recovery: Dibromofluoromethane		Styrene	ug/L			1
Dibromofluoromethane	1330-20-7	Xylenes, Total	ug/L	ND	5.0	1
Dibromofluoromethane	SURR	OGATES- In Percent Recovery:				
		Dibromofluoromethane				
		Toluene-d8	97.5	(88 - 110%)		
p-Bromofluorobenzene		p-Bromofluorobenzene	99.9			
1,2-dichloroethane-d4		1,2-dichloroethane-d4	100	(80 - 120%)		·

Login #L November 25, 1998 02:07 pm

KEMRON ENVI MMENTAL SERVICES

Lab Sample ID: L9811250-06 Client Sample ID: BG 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Collected: 11/12/98 1330 COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	350		10	2	N/A	DLP	11/16/98	13:30	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811250-06

Client Sample ID: BG 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Dil. Type: N/A COC Info: N/A Date Collected: 11/12/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/17/98
Analysis Date: 11/18/98 Time:

Instrument: HP10

Analyst: CDB Lab File ID: 056R0101

Method: 8082/3550 Run ID: R56467 Batch : WG49492

CAS #	Compound	Units	Result Qualifier	cs RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1 1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	49.3	(13 - 154%) IF,SMI (25 - 140%)		

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Dil. Type: N/A COC Info: N/A Lab Sample ID: L9811250-06 Sample Weight: N/A Client Sample ID: BG 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL Extract Volume: N/A

% Solid: N/A

Matrix: Water Date Collected: 11/12/98

TCLP Extract Date: N/A Extract Date: 11/17/98 Method: 8081A\3510C Instrument: HP9

Analyst: ECL Lab File ID: 1438 Run ID: R56548 Analysis Date: 11/18/98 Time: Batch : WG49491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L		ND	0.05	1
319-85-7	beta-BHC	ug/L		ND	0.05	ī
319-86-8	delta-BHC	ug/L		ND	0.05	ī
58-89-9	gamma-BHC (Lindane)	ug/L		ND	0.05	ī
76-44-8	Heptachlor	ug/L		ND	0.05	ī
309-00-2	Aldrin	ug/L		ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L		ND	0.05	1
959-98-8	Endosulran I	ug/L		ND	0.05	1
60-57-1	Dieldrin	ug/L		ND	0.10	1
72-55-9	4,4'-DDE	ug/L		ND	0.10	1
72-20-8	Endrin	ug/L		ND	0.10	1
33213-65-9	Endosulfan II	ug/L		ND	0.10	1
72-54-8	4,4'-DDD	ug/L		ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L		ND	0.10	1
50-29-3	4,4'-DDT	ug/L		ND	0.10	ı
72-43-5	Methoxychlor	ug/L		ND	0.50	1
53494-70-5	Endrin ketone	ug/L		ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L	-	ND	0.10	1
5103-71-9	alpha Chlordane	ug/L		ND	0.05	1
5103-74-2	gamma Chlordane	ug/L		ND	0.05	1
8001-35-2	Toxaphene	ug/L		ИD	1.0	1
SURR	OGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xylene	43.2	(13 - 154%)		
	Decachlorobiphenyl	45.0	(25 - 140%)		

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Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-06 Client Sample ID: BG 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL

Matrix: Water

Date Collected: 11/12/98

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 20:19 Instrument: HPMS5 Analyst: MDC Lab File ID: 8708 Method: 8270C\3510C Run ID: R56742 Batch: WG49409

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	7.0	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10 10	2
95-57-8	2-Chiorophenol	1107/T.	ND	10	4
541-73-1	1.3-Dichioropenzene	ug/L	ND	10	4
106-46-7	1,4-Dichiorobenzene.	ug/L	ND		4
95-50-1	1,2-Dichioropenzene.	ug/L	ND	10	4
95-48-7	2-Methylphenol	ug/L	ND	10	2
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND ND	10	2
106-44-5	4-Metryiphenoi	ug/L	ND	10	4
621-64-7	N-Nitroso-di-n-propylamine.	ug/L	ND ND	10	2
67-72-1	Hexachloroethane	ug/L	ND	10	2
98-95-3	Nitrobenzene	ug/L		10	2
78-59-1	Isophorone	ug/L	ND	10	2
88-75-5	2-Nitrophenol		ND	10	2
105-67-9	2.4-Dimethylphenol	ug/L ug/L	ND	10	2
111-91-1	2,4-Dimethylphenol. Bis(2-Chloroethoxy)Methane	ug/L	ND	10	2
120-83-2	2,4-Dichlorophenol		MD	10	2
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2
91-20-3	Naphthalene	ug/L	ND	10	2
106-47-8	4-Chloroaniline	ug/L ug/L	ND	10	2
87-68-3	Hexachlorobutadiene	ng/L	ND ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2
91-57-6	2-Methylnaphthalene	ug/L	ND	10	4
77-47-4	Hexachlorocyclopentadiene	ug/L	. ND	10 10	2
88-06-2	2,4,6-Trichlorophenol	ug/L	ND ND		2
95-95-4	2,4,5-Trichlorophenol	ug/L	ND ND	10	2
91-58-7	2-Chloronaphthalene.	ug/L	ND	50	2
88-74-4	2-Nitroaniline.	ug/L	ND	10	2
131-11-3	Dimethylphthalate	ug/L	ND ND	50	2
208-96-8	Acenaphthylene	1100/E	ND ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2
99-09-2	3-Nitroaniline	ug/L	ND	10	2
83-32-9	Acenaphthene	ug/L		50	2
51-28-5	2,4-Dinitrophenol	ug/L	ND	10	2
100-02-7	4-Nitrophenol.	ug/L	ND	50	2
132-64-9	Dibenzofuran	ug/L	ND	50	2
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2
84-66-2	Diethylphthalate	ug/L	ND	10	2
7005-72-3	Diethylphthalate	ug/L	ND	10	2
7003-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811250-06 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A Client Sample ID: BG 1112/GRAB

Site/Work ID: PEDRICK TOWN DISPOSAL Matrix: Water Date Collected: 11/12/98 % Solid: N/A

Instrument: HPMS5 Method: 8270C\3510C

TCLP Extract Date: N/A
Extract Date: 11/13/98
Analysis Date: 11/18/98 Time: 20:19 Analyst: MDC Run ID: R56742 Lab File ID: 8708 Batch : WG49409

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	•
86-73-7	Fluorene	ug/L	ND	10	2	
100-01-6	4-Nitroaniline	ug/L	ND	50	$\bar{2}$	
534-52-1	4,6-Dinitro-2-methylphenol	ug/L	ND	50	2	
86-30-6	N-Nitrogodiphenylamine	ug/L	ND	10	2	
101-55-3	4-Bromophenyl-phenylether	ug/L	ND	10	2	
118-74-1	nexachiorodenzene	ug/L	ND	10	2	
87-86-5	Pentachlorophenol	ug/L	ND	50	2	
85-01-8	Phenanthrene	ug/L	ND	10	2	
120-12-7	Anthracene	uq/L	ND	10	2	
86-74-8	Carbazole	ug/L	ND	10	2	
84-74-2	Di-N-Butylphthalate	ug/L	ND	10	2	
206-44-0	Fluoranthene	uq/L	ND	10	2	
129-00-0	Pyrene	ug/L	ND	10	2	
85-68-7	Butylbenzylphthalate	ug/L	ND	10	2	
91-94-1	3,3'-Dichlorobenzidine	ug/L	ND	20	2	
56-55-3	Benzo(a) anthracene	ug/L	ND	10	2	
218-01-9	Chrysene	ug/L	ND	10	2	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L	мD	10	2	
117-84-0	Di-n-octylphthalate	ug/L	ND	10	2	
205-99-2	Benzo(b) fluoranthene	ug/L	йD	10	2	
207-08-9	Benzo(k) fluoranthene	ug/L	ЙD	10	2	
50-32-8	Benzo (a) pyrene	ug/L	ND	10	2	
193-39-5	Indeno(1,2,3-cd) pyrene	ug/L	ND	10	4	
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ЖD	10	2 2	
191-24-2	Benzo(g,h,i)Perylene	ug/L	ND	10	2	
SURR	OGATES- In Percent Recovery:			•		
	2-Fluorophenol	40.3	(21 - 100%)			
,	Phenol-d5	23.1	(10 - 94%)			
	Nitrobenzene-d5	57.3	(35 - 114%)			
	2-Fluorobiphenyl	61.7	(43 - 116%)			
	2,4,6-Tribromophenol	88.3	(10 - 123%)			
	p-Terphenyl-d14	97.5	(33 - 141%)			

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811250-06 Client Sample ID: BG 1112/GRAB Site/Work ID: PEDRICK TOWN DISPOSAL Matrix: Water

Date Collected: 11/12/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS2 Analyst: CMS Lab File ID: 2VR27627

Method: 8260B Run ID: R56480 Batch : WG49540

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/18/98 Time: 16:08

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
74-87-3	Chloromethane	11 m /T				
74-83-9	Bromomethane.	ug/L		ND	10	1
75-01-4	Vinyl chloride	ug/L		ND	10	1
75-00-3	CHIOroernane	ug/L		ND	10	1
75-09-2	Methylene chloride	ug/L		ND	10	1
67-64-1	Acetone	ug/L		ND	5.0	1
75-15-0	Carbon disulfide	ug/L	19	ND	10	1
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	1
75-34-3	1,1=D1CHIOTO@TD2D@	ug/L		ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L		ИD	5.0	1
67-66-3	Chloroform.	ug/L		ND	5.0	1
107-06-2	1,2-Dichloroethane	ug/L		MD	5.0	1
78-93-3	2-Bucanone	ug/L		ND	5.0	1
71-55-6	1,1,1-TTICHIOroethane	ug/L		ND	10	1
56-23-5	Carbon tetrachloride	ug/L ug/L		ND	5.0	ı
75-27-4	BIOMOGICALOromethane	ug/L ug/L		MD	5.0	ī
78-87-5	1,2-Dichloropropane. cis-1,3-Dichloropropene.	ug/L		MD	5.0	1
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1
79-01-6		ug/L		ND	5.0	<u>ī</u> .
124-48-1	Dibromochioromethane	ug/L		ND	5.0	1
79-00-5	1,1,2-Trichloroethane	ug/L		ND ND	5.0	ī
71-43-2	Benzene	ug/L		ND ND	5.0 5.0	<u> </u>
10061-02-6	trans-1,3-Dichloropropene.	ug/L		ND	5.0	<u> </u>
75-25-2	Bromororm	ug/L		ND ND	5.0 5.0	‡
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1
591-78-6	Z"REAGHUNE	ug/L		ND		<u> </u>
127-18-4	Tetrachloroethene	ug/L		ND	10 5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0 5.0	1
108-88-3	Totuene	ug/L		ND		7
108-90-7	Chlorobenzene	ug/L		ND	5.0 5.0	<u> </u>
100-41-4	Ethyl benzene	ug/L		ND ND	5.0	1
100-42-5	Styrene	ug/L		ND		‡
1330-20-7	Xylenes, Total	ug/L		ND	5.0	<u> </u>
		ug/D		ND	5.0	1
SURR	OGATES- In Percent Recovery:					
	Dibromofluoromethane	101	1 (36 - 118 %)		
	Toluene-d8	101		38 - 110%)	•	
	p-Bromofluorobenzene	104		36 - 115%)		
	1,2-dichloroethane-d4	107	•	30 - 120%)		
		* V /	ι (20 - T20.41		

Order #: 98-11-250 November 25, 1998 12:57 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work Group	Run ID	Sample	Dil Type Matrix	Product	Method	Date Collected	Department
WG49312	R56742	L9811250-02		TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
WG49312	R56742	L9811250-05		TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
WG49312	R56742	L9811250-06		TCL Semivolatiles	8270C\3510C	12-NOV-1998	Extraction
			.		00000137000	12-NOV-1998	Extraction
WG49404	R56548	L9811250-01		Organochlorine Pesticides	8081A\3510C	12-NOV-1998 12-NOV-1998	Extraction
WG49404	R56548	19811250-05		Organochlorine Pesticides	8081A\3510C		Extraction
WG49404	R56548	L9811250-06	Water	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	EXELECTION
WG49406	R56467	L9811250-01	Water	PCB's (Water)	8082/3550	12-NOV-1998	Extraction
WG49406	R56467	L9811250-05	Water	PCB's (Water)	8082/3550	12-NOV-1998	Extraction
WG49406	R56467	L9811250-06	Water	PCB's (Water)	6082/3550	12-NOV-1998	Extraction
			**	more of contract at 12 cm	8270C\3510C	12-NOV-1998	Semivolatile - GC/MS
WG49409	R56742	L9811250-02		TCL Semivolatiles	8270C\3510C 8270C\3510C	12-NOV-1998	Semivolatile - GC/MS
WG49409	R56742	L9811250-05		TCL Semivolatiles	•		Semivolatile - GC/MS
WG49409	R56742	L9811250-06	Water	TCL Semivolatiles	8270C\3510C	12-NOV-1998	Seutagrand - 2010
WG49427	RS6375	L9811250-01	Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
WG49427	R56375	L9811250-03	Water	Total Suspended Solids	160.2	11-NOV-1998	Conventionals
WG49427	R56375	L9811250-04	Water	Total Suspended Solids	160.2	10-NOA-1338	Conventionals
WG49427	R56375	L9811250-05	Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
WG49427	R56375	L9811250-06	Water	Total Suspended Solids	160.2	12-NOV-1998	Conventionals
			Materia	Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49491	R56548	L9811250-01		Organochlorine Pesticides	8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49491	R56548	L9811250-05			8081A\3510C	12-NOV-1998	Semivolatile - GC
WG49491	R56548	L9811250-06	Water	Organochlorine Pesticides	909TW/33TOC	12-101-1930	
WG49492	R56467	L9811250-01	. Water	PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
WG49492	R56467	L9811250-05	Water	PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
WG49492	R56467	L9811250-06		PCB's (Water)	8082/3550	12-NOV-1998	Semivolatile - GC
W540540	756406	*******	Water	TCL Volatiles	8260B	12-NOV-1998	Volatile - GC/MS
WG49540	R56480	L9811250-02			8260B	12-NOV-1998	Volatile - GC/MS
WG49540	R56480	L9811250-05		TCL Volatiles	8260B	12-NOV-1998	Volatile - GC/MS
WG49540	R56480	L9811250-06	Water	TCL Volatiles	02000	12-1101-1330	

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - Ann L. Clark BAD - Becky A. Diehl CEB - - Chad E. Barnes CDB - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens CRC - - Carla R. Cochran DIH - - Deanna I. Hesson DKM - Dewey K. Miller DLN - - Deanna L. Norton DLP - Dorothy L. Payne ECL - - Eric C. Lawson FEH - - Fay E. Harmon HV - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH . . Ji Y. Hu KHA - - Kim H. Archer KMS - · Kevin M. Stutler KRA - . Kathy R. Albertson MDA - Mike D. Albertson

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - - Michael L. Schimmel MMB - - Maren M. Beery RDC - - Rebecca D. Cutlip RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - - Robert E. Kyer RSS - - Regina S. Simmons RWC - - Rodney W. Campbell SJK - - Sindy J. Kinney SIM - - Shawn I. Marshall SLP - - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TJW - - Thomas J. Ware TRS - - Todd R. Stack VC - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	ifier	Description	Qualifier	Description
(A)	See t	he report narrative	N	Tentatively Identified Compound (TIC)
(B)	See t	he report narrative	NA	Not applicable
(C)	See t	he report narrative	ND	Not detected at or above the reporting limit (RL)
+	Corre	elation coefficient for the MSA is less than 0.995	NF	Not found
<	Less	than	NFL	No free liquid
>	Grea	ter than .	NI	Non-ignitable
В	Prese	ent in the method blank	NR	Analyte is not required to be analyzed
C	Conf	irmed by GC/MS	NS	Not spiked
*	Surro	ogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Conf	luent growth	QNS	Quantity not sufficient to perform analysis
D	The a	analyte was quantified at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surro	gate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estin	nated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Prese	nt below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free	liquid	SMI	Sample matrix interference on surrogate
I	Semi	quantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Prese	nt below nominal reporting limit	TNTC	Too numerous to count
L	Samp	ole reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Dupl	icate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
			X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC



KEMRON ENVIRONMENTAL SERVICES OHIO VALLEY LABORATORY QUALITY CONTROL SUMMARY

MATRIX:

WORKGROUP: wg49427

METHOD: 160.2

Water

RUN DATE: 11/16/98

ANALYST: dip

DUPLICATE: 11-252-03

UNITS: mo/L

	В ————— П											-	ENT RECO	VERY		PERCENT	T RPD
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	REP RPD	RPD UCL
TSS	5.00	ND	50.00	49.00	832.00	838.00	NR	NR	NR	98.0	81.0	114.5	NR	NR	NR	0.72	20.00

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT
NA = NOT APPLICABLE
ND = NOT DETECTED
NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



Method: 8260A

Run Date: 11/18/98

LCS2 FLNM: NA

LCS DF: 1

Method: 8260A Matrix: Water

280A Instrument ID: HPMS_2
Vater BLK FLNM: 28K27619

SMPL Num: 11-069-02

SMPL DF: 10

Units: vale

BLK2 FLNM: NA

SMPL FLNM: 2BR27622 MS FLNM: 2BR27623.D MS DF: 10 MSD DF: 10

LCS FLNM: 2QC27620.D

MSD FLNM: 28R27624.D

	, , , , , , , , , , , , , , , , , , , ,					CONCENTRA	TION, PPE				Ī	<u> </u>		PERC	ENT REC	OVERY			PERCE	NT RPD
•						LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPD
	ROL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	սց/Լ	ug/L	ug/L	%	%	%	%		%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	17.4%	NA NA	20.0	ND	16.9	15.5	20.0	86.9	NA.	38.0	148.0	84.7	77.5	60.0	. 140.0	8.8	20.0
chloromethane	10.0	ND	ND	15.4	NA	20.0	ND	16.5	16.2	20.0	76.9	NA	56.0	132.0	82.7	81.2	D	273.0	1.8	20.0
vinyl chloride	10.0	ND	OM.	17.4	NA :	20.0	ND.	: 18.1	17.0	20.0	87.1	NA	68.0	125.0	90.5	84.8	ಂ	251.0	6.5	20.0
bromomethane	10.0	ND	ND	20.2	NA	20.0	ND	21.0	20.3	20.0	100.9	NA	55.0	138.0	105.0	101.3	D	242.0	3.6	20.0
chloroethane	10,0	ND	ND	19.9	NA.	20.0	ND	19.8	18.8	20.0	99.5	NA.	70.0	128.0	98.8	94.2	14.0	230.0	4,7	20.0
trichlorofluoromethane	10.0	DN	ND	20.1	NA	20.0	ND	20.9	19.3	20.0	100.7	NA	70.0	127.0	104.4	96.7	17.0	181.0	7.7	20.0
frean 113	NTC	ND	ND	NA	NA	20.0	ND	- NA	NA NA	20.0	NA	NA	NA S	NA	NA	NA	70.0	130.0	, NA	20.0
acetone	100.0	ND	ND	22.4	NA	20.0	19.0	53.6	42.4	20.0	112.1	NA	44.0	114.0	172.8	117.0	70.0	130.0	23.3	20.0
1,1-dichlorosthene	5.0	ND	ND	16.1	NA .	20.0	ND:	15.4	14.4	20.0	80.4	NA 🖯	69.0	144.0	77.1	72.2	D 🌣	234.0	8.6	20.0
iodomethane	NTC	GN	ND	23.0	NA.	20.0	ND	23.4	21.8	20.0	115.0	NA	NA	NA	117.1	108.9	70.0	130.0	7.3	20.0
methylene chloride	5.0	ИО	ND	28.3	NA.	20.0	3.4	29.7	29.3	20.0	141.7	NA	71.0	128.0	131.4	129.6	D	221.0	1.2	20.0
carbon disulfide	5.0	ND	ND	22.3	NA	20.0	ND	21.8	20.4	20.0	111.4	NA	67.0	136.0	109.0	102.2	70.0	130.0	6.4	20.0
acrylonitrile	NTC	DN	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA B	NA	NA.	NA	NA	70.0	130.0	NA	20.0
trans-1,2-dichloroethene	5.0	ND	ND	24.6	NA	20.0	ND	24.8	24.1	20.0	123.1	NA	85.0	133.0	124.0	120.4	54.0	156.0	2.9	20.0
Vinyl acetate	10.0	ND	ND.	34.2	NA I	20.0	ND	39.3	37.5	20.0	171.2	NA	9.0	236.0	196.6	187.7	9.0	236.0	4.7	20.0
1,1-dichloroethane	5.0	ND	ND	23.1	NA	20.0	ND	22.9	22.8	20.0	115.5	NA	82.0	124.0	114.5	113.9	59.0	155.0	0.5	20.0
2-butanone	100.0	ND	ND	26.4	NA	20.0	3.6	36.9	31.4	20.0	132.2	NA.	43.0	140.0	166.7	139.2	70.0	130,0	16.1	20.0
2,2-dichioropropane	5.0	ND	ND	22.5	NA	20.0	ND	21.4	20.3	20.0	112.6	NA	77.0	126.0	107.0	101.3	60.0	140.0	5.5	20.0
cis-1,2-dichloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.8	21.4	20.0	107.9	NA	69.0	130.0	108.8	107.1	60.0	140,0	1.6	20.0
chloroform	5.0	ND	ДИ	22.4	NA	20.0	ND _	22.3	22.0	20.0	112.1	NA	83.0	121.0	111.4	109.9	51.0	138,0	1.4	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

8LK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

DEKS - DECOUR MERIOD DIRIK

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

8260

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#....**:::::::::**

Method:

Run Date: 11/18/98

LCS2 FLNM: NA LCS DF: 1

8260A Matrix: Water

Instrument ID: HPMS_2 BLK FLNM: 2BK27619

SMPL Num: 11-069-02 SMPL FLNM: 2BR27622

SMPL DF: 10

Units: ug/L **BLK2 FLNM**: NA MS FLNM: 2BR27623.D

MS DF: 10

MSD DF: 10

LCS FLNM: 20C27620.D MSD FLNM: 28R27624.D

	 						ATION, PPB	<u> </u>			<u> </u>			PERC	ENT REC	OVERY			PERCE	NT RPD
	, nn.					LCS Spik	8			MS Spike			LCS	LCS		······	MS	MS	MS	RPC
Target Analytes	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCŁ	MS	MSD	LCL	UCL	RPD	UCI
bromochloromethane	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1, 1, 1-trichloroethane	5.0	ND	ND	22.4	NA	20.0	ND	23.3	23.4	20.0	111.9	NA	85.0	118.0	116.6	117.0	60.0	140.0	0.3	20.0
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	5.0	ND	ND	22.3	NA	20.0	ND	21.5	20.5	20.0	111.6	NA	74.0	125.0	107.5	102.7	52.0	162.0	4.6	20.0
1,1-dichloropropene	5.0	ND	ND	23.8	NA	20.0	ND	23.9	22.7	20.0	118.8	NA	85.0	126.0	119.7	**************************************	80.0	140.0	5.2	20.0
carbon tetrachloride	5.0	ND	ND	22.5	NA	20.0	ND	21.8	20.7	20.0	112.7	NA	73.0	129.0	109.1	103.7	70.0	140.0	5.0	20.0
1,2-dichloroethane	5.0	ND	ND	22.9	NA	20.0	ND	23.9	23.3	20.0	114.4	NA	76.0	123.0	119.3	116.3	49.0	155.0	2.5	، 20.0 20.0
penzene	5,0	ND	ND	21.9	O NA 👵	20.0	15.8	36.7	37.1	20.0	109.4	NA	86.0	119.0	104.5	106.4	37.0	151.0	90 (90000) 9094660	Maria Maria I
trichloroethene	5.0	ND	ND	21.B	NA	20.0	ND	21.4	21.3	20.0	108.8	NA NA	82.0	120.0	106.8	106.7	71.0	and the state	1.0	20.0
1,2 dichlaropropane	5.0	ND	ND	22.5	NA NA	20.0	ND	23.5	23.7	20.0	112.5	NA.	74.0	126.0	117.6	118.3		157.0	0.1	20.0
bromodichloromethane	5.0	ND	ND	23.1	NA	20.0	ND	23.3	23.2	20.0	115.6	NA	74.0	126.0	116.3	116.0) D	210.0	0.6	20.0
dibromomethane	5,0	שמ	ND	23.3	NA .	20.0	ND .	25.0	: 24.7	20.0	116.6	NA.	78.0	125.0	125.1	A 201 1000	35.0	155.0	0.2	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	20.5	NA	20.0	ND	12.0	8.5	20.0	102.3	NA	68.0	Christian resolution		123.4	80.0	140.0	₩1,4 %	, 20,0
4-methyl-2-pentanone	10.0	ND	ND	21.3	NA .	20.0	. 13.1	45.5	41.2	20.0	106.7	tinii ilas	g i Timbri	144.0	59.8	42.5	70.0	130.0	33.7	20.0
cis-1,3-dichloropropene	5.0	ND	ND	23.4	NA	20.0	ND	23.0	23.6	20.0		NA:	70.0	127.0	162.2	140.7	70.0	130.0	9.9	20.0
toluene	5.0	ND	ND	23.2	NA .	20.0	91.8	109.9	10 to 10 to		116.9	NA CATRO	77.0	123.0	115.1	11 8. 1	D	227.0	2.6	20.0
rans-1,3-dichloropropene	5.0	ND	ND	22.8	88811111254. NA	20.0	ND ND	9 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	111.1	20.0	115.8	< NA⊜	83.0	119.0	90.7	96.7	47.0	150.0	1.18	20.0
1.1.2-trichloroethane	5.0	ND	ND	22.0	NA NA	20.0		23.6	23.5	20.0	113.9	NA	74.0	124.0	117.8	117.5	17.0	183.0	0.2	20.0
2-hexanone	10.0	kropped kodpre	es university		ent was a serie		: ND	24.5	23.8	20.0	110.2	NA .	72.0	119.0	122.7	118.9	52.0	150.0	3.1	20.0
an Francisco de Carlos de	2002-2004-152-2004 C	ND	ND	23.5	NA Statementalische	20.0	ND	30.0	29.3	20.0	117.7	NA	55.0	114.0	150.1	146.5	70.0	130.0	2.4	20.0
1,3-dichloropropane	6.0	ND	ND	22.8	NA	20.0	ND .	24.6	24.0	20.0	113.9	NA	73.0	122.0	122.9	120.0	60.0	140.0	2.4	20.0
tetrachloroethene	5.0	ND	ND	21.8	NA	20.0	ND	20.9	20.7	20.0	109.2	NA	82.0	120.0	104.5	103.5	6 4.0	148.0	1.0	20.0
dibromochloromethane	5.0	ND	ND	22.2	NA	20.0	ND	23.4	23.5	20.0	111.0	NA	72.0	121.0	ar provinces	117.3	53.0	149.0	::0:1 ::0:1	20.0

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL - Upper Control Limit

RPD = Relative Percent Difference

Run Date: 11/18/98

LCS2 FLNM: NA LCS DF:

Method: **B260A**

Water

Instrument ID: HPMS_2 BLK FLNM: 28K27619 SMPL Num: 11-069-02

SMPL DF: 10

Matrix: Units:

ug/L

BLK2 FLNM: NA SMPL FLNM: 2BR27622 MS FLNM: 2BR27623.D MS DF: 10

10

LCS FLNM: 2QC27620.D

MSD FLNM: 2BR27624.D

MSD DF:

		<u> </u>				ONCENTR	ATION, PPE	3						PERC	ENT REC	OVERY			PERCEN	IT RPD
	J					LCS Spik	0			MS Spike			LCS	LCS			MŞ	MS	MŞ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L_	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	 %	%	%	%
1,2-dibromoethane	5.0	ND	ND	22.5	NA	20.0	ND	24.9	24.6	20.0	112.7	NA	75.0	121.0	124.3	123.0	60.0	140.0	1,1	20.0
chlorobenzene	5.0	ND	ND	21.4	NA .	20.0	ND	21.2	20.8	20.0	107.0	NA	83.0	120.0	105.9	104.2	37.0	160.0	1.8	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	22.1	NA	20.0	ND	21.9	22.2	20.0	110.3	NA	79.0	118.0	109.4	110.9	60.0	140.0	1.4	20.0
ethylbenzene	5.0	ND	ND	22.2	NA **	20,0	45.3	65.9	65.5	20.0	111.0	NA X	82.0	119.0	103.0	101.1	37.0	162.0	0.6	20.0
m+p-xylene	5.0	ND	ND	43.4	NA	40.0	122.2	162.1	161.0	40.0	108.4	NA.	81.0	121.0	99.8	97.1	60.0	140.0	0.7	20.0
o-xylene	5:0	ND	ND	22.2	NA	20.0	86.4	106.9	107.3	20.0	110.8	NA	81.0	199.0	102.3	eganide erus	60.0	140.0	0.4	20.0
#tyrene	5.0	ND	ND	21.8	NA	20.0	ND	23.9	24.3	20.0	109.1	NA	81.0	118.0	119.5	121.4	60.0	140.0	1.6	20.0
bromoform	5.0	ND	OND O	21.9	NA	20.0	: ND	23.7	23.7	20.0	109.5	NA	68.0	129.0	9.00	118.3	45.0	169.0	0.3	20.0
isopropylbanzene	5.0	ND	ND	21.3	NA	20.0	6.0	26.6	26.2	20.0	106.6	NA.	81.0	121.0	102.8	101.2	60.0	140.0	1.3	20.0
1,1,2,2-tetrachloroethane	5.0	ND	ND	23.7	NA	20.0	ND	28.0	27.3	20.0	118.5	NA N	61.0	137.0	140.1	136.5	46.0	157.0	2.6	20.0
1,2,3-trichloropropane	5.0	ND	ND	21.9	NA	20.0	ND	26.8	25.1	20.0	109.3	NA	72.0	ା ଅନ୍ୟୁଷ୍ଟ 130.0	134.2	125.5	60.0	140.0	6.7	20.0
rans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA Z	NA 8	NA	NA	NA	NA	NA NA	NA NA	20.0
propyl-benzene	5.0	ND	ND	22.5	NA	20.0	12.9	33.3	33.9	20.0	112.3	NA	. '*C::::	135.0	101.9	104.9	60.0	140.0	10000 10000 000000	100 20 100 13
bromobenzene	5.0	ND	ND	22.1	NA	20.0	ND	21.7	22.0	20.0	110.6	NA .	86.0	69 NO.	State Paris	Referencia	8795 FOR	95625957	1.8	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	22.4	NA	20.0	19.9	42.9	45.1	20.0		1,111,030	us a self filter	118.0	108.4	110.2	60.0	140.0	1.6	20.0
2-chlorotoluene	5.0	ND	ND	23.3	NA S	20.0	ND	20.5			111.9	NA	83.0	121.0	115.0	126.0	60.0	140.0	5.0	20.0
4-chlorotoluene	5.0	ND	ND	23.3	Harana Laska (Nasa)	and the book			22.1	20.0	116.5	NA 🔆	80.0	126.0	102.7	110.3	60.0	140.0	7.2	20.0
tert-butyl-benzene	5.0	ND	10-00-000,1900-000	34,490001014446600	NA NA	20.0	ND	24.0	22.9	20.0	116.5	NA	80.0	125.0	120.1	114,5	60.0	140.0	4.8 %23 2.888	20.0
1,2,4-trimethylbenzene	300000000000000000000000000000000000000	0.000	ND	22.0	NA	20.0	, ND	19.3	18.6	20.0	110.0	NA :	79.0	114:0	96.6	93.1	60.0	140.0	3.7	20.0
The section of the Company of State (1990) of	5.0	ND	ND	22.8	NA	20.0	94.2	114.7	117.2	20.0	113.9	NA	84.0	121.0	102.6	115.2	60.0	140.0	2.2	20.0
sec-butyl-benzene	5.0	ND :	ND .	21.8	NA	20.0	2.1	22.2	21.8	20.0	108.9	NA `	81.0	122.0	100.6	98.3	60.0	140.0	2.1	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD - Relative Perd Difference 8260



6656564

















Method: 8260A Run Date: 11/18/98

LCS2 FLNM: NA LCS DF:

Matrix: Water Instrument ID: HPMS_2

SMPL Num: 11-069-02

SMPL DF: 10

Units:

BLK2 FLNM:

BLK FLNM: 2BK27619 NA

SMPL FLNM: 2BR27622

MS DF: 10 MSD DF:

10

ug/L

LCS FLNM: 2QC27620.D

MS FLNM: 2BR27623.D MSD FLNM: 2BR27624.D

						ONCENTRA	ATION, PPB							PERC	ENT REC	OVERY			DEDCE	17.00
						LCS Spike)			MS Spike	 		LCS	LCS	ort neo		140		PERCEN	
	ROL	BLK	BLK2	LCS	LCS2	Lavei	SMPL	MS	MSD	Level	LCS	LCS2	LCL				MS	MS	MS	RF
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		 			UCL	MS	MSD	LCL	UCL	RPD	U
p-isopropyl-toluene	5.0	ND	ND	21.1	NA.	20.0				ug/L	<u>%</u>	<u>%</u>	%	%	%	%	%	%	%	
1,3-dichlorobenzene	5.0	ND	ND	garan arres	syntym ir alak		2.2	21.7	21.6	20.0	105.4	NA	80.0	119.0	97.3	96.7	60.0	140.0	0.6	20
1,4-dichlorobenzene	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	50-54450000	ergale National	22.3	NA NA	20.0	ND	21.5	21.6	20.0	111.6	NA.	85.0	119.0	107.6	108.1	60.0	140.0	0.4	2
 d. 1. 1. Web Commoder very private. 	5.0	ND	ND	21.8	NA	20.0	ND	20.7	21.3	20.0	109.2	NA	82.0	122.0	103.4	108.7	18.0	190.0	3.1	
n-butyl-benzene	5.0	ND	ND	22.4	NA.	20.0	3.8	24.1	23.9	20.0	:112.2	NA	80.0	125.0	101.7	100.6	924 III 6 851	geratere.	6245	2
1,2-dichlorobenzene	5.0	ND	ND	22.1	NA	20.0	ND	21.8	22.2	20.0	110.3				4. C. U26/19	es moderning in	60.0	140.0	1.0	2
dibromo-3-chloropropane	5.0	ND	ND	22.1	NA.	20.0	sa Kalifa da	. 777			1. 1. 190	NA 	86.0	119.0	109.1	111.1	19.0	190.0	1.8	. 2
1,2,4-trichlorobenzene	5.0	ND	ND	21.7	scarce p. 4 4 4 5 4 4 5		Property of the second second	26.3	23.8	20.0	110.3	NA	66.0	134.0	131.3	119.1	60.0	140.0	9.7	2
hexachlorobutadiene	100000011110000000000000000000000000000	\$66-\$0 ³ 66-\$6666	98888888888	Copperation of	NA 8898 prominske kar	20.0	ND	20.7	21.0	20.0	108.5	NA	78.0	122.0	103.6	105.0	60.0	140.0	1.3	20
THE RESIDENCE OF STREET STREETS AND SOCIOUS AND STREET	8.0	ND	ND	21.6	NA 💮	20.0	ND.	19.6		20.0	108.1	NA	73.0	125.0	97.9	91.7	60.0	140.0	6.5	2
napthalene	10.0	ND	ND	21,2	NA	20.0	17.2	44.4	41.5	20.0	106.1	NA	74.0	148.0	136.2	121.4	90000809511000	2000 (E&SEC.)	perent management	
,2,3-trichlorobenzene	5.0	ND	ND	21.8	NA	20.0	ND	21,2	21.2	20.0	109.0	out the state	74.0	Start of San	Acres de la come	106.2	60.0	140.0	6.9	2

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49409

EXT DATE: 11/13/98

RUN DATE: 11/16/98

INSTRUMENT: HPMS5 ANALYST: mdc

METHOD: 8270 MATRIX: WATER BENCH SHEET: V105P10 BLK FLNM: 8659.D"

SMPL ID: L9810246-01 SMPL FLNM: 8877.D*

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG49312 LCS FLNM: 8660.0"

MS FLNM: 8678,0" MSD FLNM: 8679,0"

				CONCE	ITRATION							PERCEN	IT RECOVE	RY %				PERCEI	NT		BEY		
ţ	_		LCS	CONCE	ITRATION	, ug/L M\$	"." .					I CROCK	** ***	, , ,			1			J.E	₹		
ANALYTE	RDL	BLANK	SPIKE ADDED	LCS	SAMPLE	SPIKE	MS	MSD	BLANK	LCS	LCS LCL	LCS	SAMPLE	MS	MSD	MS LCL MS UCI	MSD	RPD UCL	RPO >	SAME	ฐี	<u>§</u>	MSD
PYRIDINE	5.0	ND	100	12.2	23.2	200	66.1	71,5	NA.	12.2	5	150	NA	21.4	24.2	5 150	8	40			\top	T	Ī
N-NITROSODIMETHYLAMINE	5.0	NO	100	29.5	ND	200	75.4	71.3	NA	29.5		150	NA .	38.2	35.7	5 150	7.8	40					纝
ANILINE	10.0	ND	100	24.4	ND	200	ND	ND	NA.	24,4	5	150	NA.	ND	ND	5 150	NA	40		1]	l
PHENOL	5.0	ND	100	28.1	ND	200	97.9	100.3	NA.	26.1	. 5	112	NA.	48.9	50.2	5 112	2	40					
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	59.2	ND	200	233.9	235.2	NA.	59.2	12	158	NA	116,9	117.6	12 158	1 1	40	construction (AM)				10000
2-CHLOROPHENOL	5.0	ND	100	58.4	ND	200	52.8	49.5	NA.	58.4	23	134	NA .	26.4	24.7	23 134		40					
1,3-DICHLOROBENZENE	5.0	ND	100	53,1	ND	200	141.3	139.2	NA	53.1	5	172	NA.	70.7	69.6	5 172	2	40					ļ
1.4-DICHLOROBENZENE	10.0	NO.	100	54.8	ND.	200	135,4	133,0	NA	54.8	20	124	NA	67.7	66.5	20 124	3	40					
BENZYL ALCOHOL	5.0	ND	100	54.3	3499	200	3207.5	3245.4	NA.	54.3	5	150	NA	NA	NA .	5 150	1 1	40	e en constantible				J
1,2-DICHLOROBENZENE	5.0	ND	100	55.2	ND	200	139.5	136.5	NA.	55.2	32	129	NA	69.B	68.2	32 129	2	40					1 88
2-METHYLPHENOL	5.0	ND	100	59.5	ND	200	156.4	162.0	. NA	59.5	5	150	NA	78.2	81.0	5 150	3	40					J
BIS(Z-CHLOROISOPROPYL)ETH	5.0	ND	100	61.1	ND	200	163.7	183.4	NA.	81.1	36	166	NA.	81.6	81.7	36 166	0	40					
3- å 4-METHYLPHENOL	5.0	ND	100	53,5	ND	200	153.4	157.0	NA.	53.5	5	150	NA.	76.7	78.5	5 150	2	40			oneoloo.	000000000	dono:
N-NITROSO-DI-N-PROPYLAMIN	5.0	ND	100	63.2	ND	200	166.7	165,7	NA	63.2	- 6	230	NA.	83.3	82.8	5 230		40				8 1 888	
HEXACHLOROETHANE	5.0	ND	100	55.6	ND	200	138.4	135.7	NA	55.6	40	113	NA.	69.2	67.9	40 113	2	40	a a carata a sassas.		Marketon.		J
NITROBENZENE	5.0	ND	100	63.5	NO	200	168.7	168,3	NA .	63.5	35	180	NA	84.3	84,1	35 180	0	40					
ISOPHORONE	5.0	ND	100	74.6	ND	200	177.2	177.9	NA	74.6	21	196	NA	88.6	89.0	21 196	0	40			version.		de session
2-NTROPHENOL	5.0	NO	100	0.67	ND	200	170.2	171.7	NA	68.0	29	182	NA .	85.1	85.9	29 182	1	40					
2,4-DIMETHYLPHENOL	5.0	ND	100	76.6	ND	200	106.0	491.4	NA	76.6	32	119	NA.	53.0	245.7	32 119	129	40	•				H
BISIZ-CHLORGETHOXYIMETHA	25.0	ND.	100	61.5	ND	200	153.8	152.3	NA	61.5	33	184	NA	76.9	76.1	33 184		40					
BENZOIC ACID	5.0	В	100	5.6	ND	200	252.8	256.7	NA	5.6	5	150	· NA	126,4	128.3	5 150	2	40		505950	00000.00	000	l
2.4+DICHLOROPHENOL	5.0	ND	100	69.2	ND	200	202.3	209.8	NA.	69.2	39	135	N4	101.2	104.8	39 135		40					
1,2,4-TRICHLOROBENZENE	5.0	ND	100	57.3	ND	200	156.6	155.7	NA.	57.3	44	142	' NA	78.3	77.6	44 142	1	40					J
NAPHTHALENE	5.0	NO	100	63.1	NO	200	170,4	170.4	NA	63.1	21	133	NA.	85.2	85,2	21 133	•	40					
4-CHLOROANILINE	5.0	ND	100	35.9	ND	200	26.0	31.7	NA.	35.9	5	150	NA .	13.0	15.8	5 150	20	40			000000000	xxxxxxxxx	0000
HEXACHLOROBUTADIENE	10.0	NO	100	61.0	ON	200	166,3	165.4	NA .	61.0	24	115	ŅA	83.1	82.7	24 116		40				# #	100
4-CHLORO-3-METHYLPHENOL	5.0	ND	100	86.4	ND	200	206.8	211.4	NA	86.4	22	147	NA	103.4	105.7	22 147	2	40			Scoon do	000	A 20000
2-METHYLNAPHTHALENE	5.0	ND	100	66.7	ND	200	189,7	189.7	NA.	66.7		150	NA	94.9	94.8	5 150	0	40					/
HEXACHLOROCYCLOPENTADI	5.0	ND	100	33.4	ND	200	37.1	34.7	NA	33.4	5	150	NA	18,5	17.3	5 150	7	40	500000000000000000000000000000000000000	*****	8000000	0000000	d
2.4.6-TRICHLOROPHENOL	25.0	ND.	100	80.5	ND	200	214.8	220.0	JA.	80.5	37	144	NA.	107.4	110.0	37 144	3	40				: 	1
2,4,5-TRICHLOROPHENOL	5.0	ND	100	91.3	ND	200	198.3	203.1	NA.	91.3	. 5	150	NA	99,1	101.6	5 150	2	40			000000000	30000000	J
2-CHLORONAPHTHALENE	25.0	ND	100	70,6	ND	200	183.9	182.5) NA	70.6	60	118	NA .	91.9	91.2	60 118	100	40				###	1
2-NITROANILINE	5.0	ND	100	74.0	ND	200	19.2	20.5	NA.	74.0	5	150	NA.	9.6	10.3	5 150	7	40			32000 PT 0	se r see	desse.
DIMETHYLPHTHALATE	5.0	NO	100	86.0	ND	200	200,0	202.6	NA.	86.0	5	112	NA	100.0	101.3	5 112	1	40				8 1 888	1 888
ACENAPHTHYLENE	5.0	ND	100	78.0	ND	200	208.7	208.1	NA	78.0	33	145	NA	104.3	104.0	33 145		40	000000000000000000000000000000000000000		session.	885 887 W	1000
6-DINITROTOLUENE	5.0	ND	100	86.9	ND	200	341.7	346.4	NA .	86.9	50	158	NA	170.8	173.2	50 158		40	 			≋ ₩	**
3-NITROANILINE	25.0	ND	100	56.8	ND	200	65.5	72.7	NA.	56.8	5	150	NA.	32,7	36,4	5 150	11	40			s:::::	250 00000	8000
ACENAPHTHENE	3.0	ND	100	78.5	ND	200	194.6	192.4	NA.	78.6	47	145	NA .	97.3	96.2	47 145	100	40	100000		###	4	100
2.4-DINITROPHENOL	25.0	ND	100	52.0	ND	200	ND	ND	NA	52.0	5	191	NA	ND	ND	5 191	NA.	40			ennana ver		d
4-NITROPHENOL	25.0	ND.	100	43.3	NO	200	104.1	104.8	NA.	43.3	500	132	NA	52.0	52.4	5 132	1	40				###	100
DIBENZOFURAN	5.0	ND	100	83.2	ND	200	206.9	209.5	NA	83.2	5	150	NA.	103,5	104.7	5 150	1	40	z 1000000000000000000000000000000000000	2000		0000000	door.
2,4-DINITROTOLUENE	5.0	ND	100	105.6	ND	200	211.1	215.9	NA .	105.6	39	139	NA	105.5	107.9	39 139	2	40				24	100

NOTES & DEFINITIONS : NA = NOT APPLICABLE ND = NOT DETECTED ROLERPORTING DETECTION LIMIT NS = NOT SPIKED L= below QC limit H=above QC limit









KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49409

EXT DATE: 11/13/98

RUN DATE: 11/16/98

INSTRUMENT: HPMS5 ANALYST: mdc

METHOD: 8270 MATRIX ; WATER

BENCH SHEET: V105P10 BLK FLNM: 8659.0"

SMPL ID : L9810246-01 SMPL FLNM: 8677.D MS FLNM : 8678.0"

CONCENTRATION UNITS: UG/L LCS FLNM; 8660.D*

PREP WORK GRP: WG49312

MSD FLNM: 8679.D"

		·		CONCE	NTRATION	, υ <u>ο</u> /ξ						PERCE	NT RECO	ÆRY, 9					PERCE	NT		BEY	OND IITS
ANALYTE	RDL	BLANK	LCS SPIKE ADOED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS	SAMPLE	_MS	MSD	MS LC	L MS UC	MSD RPD	RPD UCL	BEYON D RPD LIMIT	SAMPLE	E PAR	NS.
DIETHYLPHTHALATE	5.0	ND	100	98.6	ND	200	217.2	220.6	NA	98.6	5	114	NA	108.6	110.3	5	114	2	40		П		\top
FLUORENE	5.0	ND	100	90.3	NO	200	224.4	225.8	NA	603	25	158	NA .	112.2	112.9	25	155		40				
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	85.3	ND	200	225.2	226.3	NA	85.3	59	121	NA.	112.6	113.2	59	121	1	40			1	T
4-NITROANILINE	25.0	CIA	100	91.2	ND	200	94,4	18.0	NA	91.2	5	150	NA .	47.2	9.0	5	150	136	40				
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	75,7	ND	200	167.6	169.9	NA	75.7	5	150	NA.	83.8	84.9	5	150	1	40	1		****	77777
4.5-DINITRO-2-METHYLPHENO	25.0	ND	100	84.7	NO	200	123.8	131.2	NA	94.7		181	NA.	61.5	65.6	- 5	181	6	40				
N-NITROSODIPHENYLAMINE **	5.0	ND	100	101.3	ND	200	226.7	230.6	NA	101,3	5	150	NA	113.4	115.3	5	150	2	40		[]	,,,,,	
4-BROMOPHENYL-PHENYL ET	5.0	ND	100	81.8	ND	200	199.8	202.9	∴ NA.⊗	81.6	53	127	NA.	99.9	101,5	- 53	127	2	40				
HEXACHLOROBENZENE	5.0	ND	100	102.0	ND	200	218.3	220.6	NA	102.0	5	152	NA	109.1	110.3	5	152	1	40	C\$1000010000000	research a	esser Jesses	
PENTACHLOROPHENOL	25.0	ND.	100	95.3	NO	200	193,1	203.1	NA.	95.3	14	176	NA	96.5	101,5	14	176	5	40	1			d w le
PHENANTHRENE	5.0	ND	100	108.3	ND	200	224.2	227.3	NA	108.3	54	120	NA NA	112,1	113.6	54	120	1	40	18 200000000000	.00000	ossuperio	******
ANTHRACENE	5.0	ND	100	108.0	ND	200	217.7	221.5	NA	108.0	27	133	NA .	108.9	110.7	27	133	2	40				
CARBAZOLE	5.0	ND	100	95.8	ND	200	184.8	185.7	NA	95.8	5	150	NA	92.4	92.9	5	150	0	40	000000000000000000000000000000000000000	COOC 100	0000000000	000000000000000000000000000000000000000
DHN-BUTYLPHTHALATE	5.0	ND	100	117.5	ND	200	218.5	224.3	NA	117.5	**** * ****	118	NA .	109.3	112.1		118		40			## (## (## (## (## (## (## (## (## (##	
FLUORANTHENE	5.0	ND	100	119.3	ND	200	227.7	233.3	NA	119.3	26	137	NA.	113.8	116.7	26	137	2	40	100000000000000000000000000000000000000	0.0000	on poss	
PYRENE	5.0	ND	100	117.1	ND	200	222.9	232.1	NA.	117.1	.52	115	NA	111.5	116.0	52	115		40	1880 XXX		alн	d sla
BUTYLBENZYLPHTHALATE	5.0	ND	100	121.9	ND	200	227.2	234.3	NA	121.9	5	152	NA NA	113.6	117.1	5	152	3	40	800000000000	200000	2000 10000	********
BENZO/AVANTHIRACENE	10.0	ND	100	115.5	ND	200	222.4	228.8	NA	115.5		262	NA	111.2	114.6	35	262	3	40			::::l	dwla
3.3'-DICHLOROBENZIDINE	5.0	ND	100	123.5	ND	200	96.5	99.4	NA	123.5	33	143	NA	48.3	49.7	33	143	3	40	10000000000000	nonone e	~~	
CHRYSENE	5.0	ND	100	120.5	ND	200	229.3	234.4	NA.	120.5	17	168	NA	114.6	117.2	17	168	2	40				des la
SIS(2-ETHYLHEXYL)PHTHALAT	5.0	ND	100	127.2	ND	200	234.4	240.9	NA	127.2	8	158	NA	117.2	120.5	.;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	158	3	40	1900004000000	00000000	oserpecto	70000
DHN-OCTYLPHTHALATE	5.0	ND	100	110.3	NO	200	260.4	292.5	NA .	110.3		146	NA	130.2	145.3		148	12	40			wl:	dwl)
BENZOBIFLUORANTHENE	5.0	ND	100	108.2	ND	200	241.3	254.7	NA	108.2	24	159	NA	120.7	127.3	24	159	5	40	9.000000000		~~~~	*******
SENZOKIFLUORANTHENE	5.0	NO	100	114.9	ND	200	250.8	269.8	NA .	114.9	- ii	162	NA	125.4	134.9	11	162		40	1000000			
ENZOJAJPYRENE	5.0	ND	100	**************************************	ND	200	221.5	232.4	NA	113.5	17	163	NA	110.7	116.2	17	163	5	40	3460000000000	100000100	300: 100000	·\$*****
NOENOIS, 2,3-COIPYRENE	5.0	NO	100	131.1	ND	200	162.0	158.2	NA	1311		171	NA	81.0	79.1	5	174	2	40	2000000			de la
DIBENZIA HIANTHRACENE	5.0	ND	100	140.4	ND	200	170.2	164.4	NA	140,4	*************************************	227	NA	85.1	82.2	5	227	3	40	(ecopposicopy)	io conserva	nece proces	7
SENZO(G.H.IIPERYLENE	6.0	ND	100	143.8	ON	200	159.7	153.8	NA.	143.6	5	219	NA	79.8	76.9	5.0	219		40				
SURROGATES																							
-FLUGROPHENOL		43.8	100	41,3	51.t	100	46.8	49.9	43,8	41.3	21	100	51.1	46.8	49.9	21	100						
PHENOL+05		26.7	100	27.0	60.1	100	48.9	49.2	26.7	27.0	10	94	80.1	48.9	49.2	10	94						
NTROBENZENE - D5	n-versye (1900	32.2	50	31.4	45.2	50	40.9	41.1	64.3	62.9	35	114	90.5	81.7	82.2	35	114					1][
-FLUOROBIPHENYL		38.0	50	39.2	50.A	50	51.4	51.0	72.1	78.5	43	116	100.8	102.9	102.1	43	118						
2,4,6-TRIBROMOPHENOL		99.6	100	115.8	114.8	100	120,9	124.1	99.6	115.8	10	123	114.8	120.9	124.1	10	123	1]] !
-TERPHENYL - D14		65.6	50	67.9	84.0	50	63.2	85.8	131,6	135.8	33	141	128.1	126.4	131.5	33	141						# ** **

NOTES & DEFINITIONS :

NS = NOT SPIKED

INSTRUMENT: HP9

EXT'N DATE: 11/17/98

ANALYST: ECL

BLK FLNM: 1431

SAMPLE ID: NA SMPL FLNM: NA

EXT'N BENCH SHT: V105P25

RUN DATE: 11/18/98

LCS FLNM: 1432

MS FLNM : NA

EXT'N WORK GRP: WG49404 ANAL WORK GRP: WG49491

MSD FLNM; NA

			CONCE	NTRATIC	N.υg	<u>1</u>			% R	ECO	/ERY					PERCE	ท	
COMPOUNO	RDL	Blank	LCS	Sample	MS	MSD	Blank	LCS	LCS LCL		Sample	MS	MSD	MS LCL		M\$/MSII . RPD		Blank LCS Sample
	PER	FI										Harrier vocanosos	MSU MALE	_			Limits	
ALPHA-BHC	0.05	ND	0.238		NA	NA	NA.	47.6	37	134	NA.			51	145	NA	0-43	EL HOSTOTOROSISTATI
GAMMA-BHC	0.05	.NO:	0.309) ND	NA:	NA:	· NA	61.8		127	NA:			54	134	NA:	0-38	. I teratura
BETA-BHC	0.05	NO	0.398	I ND	NA	NA	NA	79.6	, , , , , ,	147	NA.			51	129	NA NA	0-28	
HEPTACHLOR	0.05	NO:	0 287	I ND	NA:	NA.	NA	57.4		iii	ŇA	Pásta in inte		10	139		0.37	li de de la constanta
DELTA-BHC	0.05	ND	0.465	,	NA	NA.	NA.	93.0	1	140	NA.	***********		56	138	NA	0-78	
ALORIN	0,05	ND:	0.280	(ND	NA.	NA.	. NA	56.0	42		NA .	******		 2B	143	. NA:	0-70	
HEPTACHLOR EPOXIDE	0.05	ND	0.377	I ND	NA	NA	NA	75.4		142	NA.	******		51	135	NA.	0-40	
GAMMA-CHILORDANE	0.05	NO	NA.	I ND	· NA	NA:	NA ·	NA:	45	٠,٠,٠,٠	· NA	NA	. NA:	45.	115	: NA	0.40	
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA.	NA	NA.	NA	,	119	NA.	NA.	NA.	45	115	NA	0-17	
ENCOSULFAN (0.05	NO:	100 0) ND	NA:	NA	NA :	60.2	45		NA .		i dinada di	1,100	123	NA ::	0.22	
4,4-DDE	0.10	ND	0.430	I ND	NA	NA	NA.	66 0		145	NA	******		64	152	NA NA	0-23	
DIELDRIN	D.10	NO	0 441	i ND	NA :	NA.	NA .	68.2	36	148	NÁ :	******		23	171	NA .	0-20	garan (
ENDRIN	0.10	ND	0 423	I NO	NA	NA	NA	84.6	30	147	NA.	******	******	56	154	NA	0-28	
4,4.00G	0.10	NO.	0.467	(ND.	NA .	NA.	: NA	93 + :	31	141	NA ·	*******	POGKODE		179	. NA	ο 3α	
ENDOSULFAN H	0.10	ND	0.371	I ND	NA	NA	NA	74.2	D	202	NA.	*****	*****	21	117	NA	0-18	
4.4.00T	0:10	Ņo∵	0.471	i NO :	NA:	ŇA:	NA ::	94.2	25	160	NA :		******	42	168	. NA.	0.22	
ENDRIN ALDEHYDE	0.10	ND	0 272	IND	NA	NA	NA	54.4	NA	NA	NA	******	******	21	115	NA	0-40	*
ENDOSLILFAN SULFATE	0.10	NO:	0.348	ND	NA :	NA:	NA .	69.6	26	144	NA .	******	*****	31	117	NA .	0-30	
METHOXYCHLOR	0.50	ND	0.446	I ND	NA	NA.	NA	89.2	NA	NA	NA	******	******	26	196	NA.	0-19	# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ÉNDRIN KETONE	0.1D.	NO	0.430	t ND	NA .	NA:	NA	86.0	NA :	NA:	NA .	******		NA:	NA.	NA ···		
Tech-CHLORDANE	1.00	NO	NA	I ND	NA	NA	NA	NA.	45	119	NA	NA.	NA		115	NA	0-40	,
TOXAPHENE	1.00	ND:	:NA;	(∙ND ∵	NA:	NA:	∵ NA · · ·	NA	41	126	NA.	ŃΑ	: NA	40.	125	NA:	D-40	
SURROGATES																		
rangan ang ang ang ang ang ang ang ang an	33333		1.1.1.1.1.1		·01000	Maria.		ereneer	22.00	ند	 !:::::::::::::::::::::::::::::::::	edenteta	5555555	55.55			tatatatatatatatat	
DECACHLOROBIPHENYL	4000	A.SA	7.61	, NA	MA∵:	٠Ņ٨٠	.:::A1;9.:::.	∵.38.1. :	33	54	::NA :::	NA:	NA:;:	:10	154			

NOTES & DEFINITIONS:

LCS, MS & MSD epiked at 0.5 ug/L LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 upt. MS-MATRIX SPIKE

MSD-MATRIX SPIKE DUPLICATE

NA - NOT APPLICABLE DL - DILUTED OUT

NO . NOT DETECTED

ROL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

SAMPLE ID : NA

EXT'N DATE : 11/17/98

ANALYST : ECL BLK FLNM : 1431

SMPL FLNM: NA

EXT'N BENCH SHT : V105P25

RUN DATE: 11/16/98

LCS FLNM: 1432

MS FLNM : NA

EXT'N WORK GRP: WG49404 ANAL WORK GRP: WG49491

MSD FLNM : NA

	1	-	CONC	ENTRA	TION,	ug/L	- -			% R	COVE	RY					PERCENT		_ _		
COMPOUND	RDL	Blank	LCS	<u>.S</u> ал	n <u>pie</u> MS	_ MS	В	lank	LCS	LCS LCL	LCS UCL S	amnle	e MS	MSD	MS LCL			RPD Advisory	Stank Stank	Sample MS	
										to a suppose of		_				chicherino		Limists			
ALPHA-BHC	0.05	ND	0.23	7 I N	NA C	NA		VA.	47.4	-	134	NA			51	145					ı
QAMMA BHC	0.05	NO:	0.28	s · i; hi	∵ NA	. NA	9 (3)	ia 🖖	57.2	32	E .	NA:	. Parana		54	134	NA ENA	0-43	. 40	# # [15] [15] [15]	!
BETA-BHC	0.05	ND .	0.37) I NE	NA.	NA		iA .	74.6	1	47	NA	******		51	129	NA NA	0-18			,
MEPTACHLOR	0.05	NO:	0.26) (NC) NA	NA		ά∷	52.6	84	ad :	NA:	HANNA	W-004000		139	NA:	0-28	: ::::::		1
DELTA-BHC	0.05	ND	0.428	I NO	NA.	NA		IA	85.6	1	40	NA.	*****		56	138		:: 0:37 · ·			1
ALDRIN	0.05	ΝD	0.283	I NC	. NA	NA	$1 \times_{N}$	A .:	52:6			NA ::					NA	0-78		# # Selectedesis	İ
HEPTACHLOR EPOXIDE	0.05	ND	0.363	I NO	NA	NA	N	Α	72.6		· •	NA.	******		: 20 : 51	143 135	CONATO:	0.38	1:::		ı
GAMMA-CHLORETANE	0.05	NO:	NA.	1 ND	∴ NA	. NA	Vicin	A	94			NA :	NA:	i NA		115	NA (00)20000	0-40	g Basas	i i i Contrator	Į
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA	N	A	NA			NA.	NA.	NA NA	45	115	ONATO:	.:0-40	. ::::		ı
ENDOSÚLFAN 1	0.05	NO:	0.282	i Nb	NA.	N/A	10 N	A :::	56.4			ŇA :	hadaani.			123	NA	0-17	. Land		ı
4,4-00E	0.10	ND	0.426	IND	NA	NA	N	A	65.2	1		NA NA	*********				NA	0.22			l
CONTROL OF THE CORNER OF THE CONTROL	(.0.10.	ND	0.426	(ND	NA	NA.	N.	Á (i)	85:6	36 1	نات الناد	NA	*******			152 171	55555555	0-23		# # 	I
ENDRIN	0.10	ND	0.392	I ND	NA	NA	N.	4	78.4		` .	NA.	********	*****			DONADOS.	0:20			ı
44.000	0.10	NO .	0.438	I ND	NA.	NA.	∷N		87:8	31:1		NA ::			1, 1, 1, 1, 1	154	NA DNADES	0-28			ı
ENDOSULFAN N	0.10	ND	0.352	I ND	NA	NA	N/	`	70.4	D 2		NA	******	******		179	NA	, Ó. 3Ó.			l
10000000000000000000000000000000000000	.0.10	,ND 🔆	Q 445	· · ND	· NA	· NA	.∵.vi		:69:Q	25 1					42	I.		0-18	0.00		l
ENDRIN ALDEHYDE	0.10	ND	0.263	I ND	NA	NA	N/	١	52.6	NA N		NA.	******	*******		115	(NA(C)) NA	.0-22::::	2000	3.54.4	ĺ
ENDOSULFAN SULFATE	D. ID.	NO.	0.337.	r Nb	NA.	NA.	O N	ide:	67.4	26 1	o Lor	بردائن	e è da e è e	danki da		7	NA NA COS	0-40			ĺ
METHOXYCHLOR	0.10	ND	0.446	I ND	NA	NA.	N/		69	NA N			*******		,	196	1,000,000,000	630. .∷			ĺ
ENDRIN KETONE	0.50	ND	0.406	(NO	NA	NA	. N		ei .	NA N	1		rejeçir			· . I	NA	0-19	3000		
Tech-CHLORDANE	1.0	NO	NA	I ND	NA	NA	NA.		NA.	45 18		iA.	NA	NA	- NA		(NA)(III)		10000		
TOXAPHENE) 0	NÒ∷	NA.;	i∴ND:	· : NA	. NA	. NA		NA .	41: 12			NA:	: NA	45 1 40 1	25	NA	0-40	1414.1	deces	
SURROGATES								·			-					-		-	****		
as terracia oro maniene		s (s	7,82	I. NA	NA .	NA:	42.4		.38.1	13 : 15		488.4	******		19: i		raitococco	Johania		2323	
DECACHLOROBIPHENML	[17.5	17,1	I NA	NA.	NA	87.4	,	85.3	25 14			******			40			[150566] 	1.14.14	

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURROGATES epiked at 20 ug/L

MS=MATRIX SPIKE

NA - NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

OL - DILUTED OUT ND - NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

INSTRUMENT: HP10

ANALYST: COB

• 053D0101

SMPL ID : NA

EXT'N DATE: 11/17/98
EXT'N BENCH SHT: V105P26

RUN DATE: 11/18/98

BLK FLNM: 052R0101 LCS FLNM: 053R0101 SMPL FLNM: NA MS FLNM: NA

EXT'N WORK GRP: WG49406

ANAL WORK GRP: WG49492

LCS Dup FLNM: NA

MSD FLNM: NA

			CONCENT	RATION, US	yL				% RE	COV	ERY						PERCENT		-		
COMPOUND	RDL	Blank	LCS_	Sample	MS	MSD	Blank	LCS	LCL	LCS UCL	Sample	MS	MSD	MS LCL	MS UCL	RPO	RPD Advisory Limits	Stank	သ	Sample	MS MS
AROCLOR 1016 AROCLOR 1221	0.5 0.5	ND ND	2.38 NA	ND ND	NA NA	NA NA	NA NA	95,4 NA	48	125 NA	NA NA	NA NA	NA NA	48 NA	125 NA	NA NA	NA NA				
AROCLOR 1232 AROCLOR 1242	0.5 0.5	ND ND	NA NA	ND ND	NA NA	NA NA	NA NA	NA NA	F1000000000000000000000000000000000000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA				
AROCLOR 1248 AROCLOR 1254	0.5 1.0 1.0	ND ND	NA NA	ND ND ND	NA NA NA	NA NA NA	NA NA NA	NA NA 97.5	NA NA 59	NA NA 122	NA NA NA	NA NA NA	NA NA NA	NA NA 59	NA NA 122	NA NA NA	NA 0-40 NA				
AROCLOR 1260 SURROGATES	1.0	ND	2.44	טא	- NA	NA.	<u> </u>														
2.4.5.6-TETRACHLORO-M-XYLENE		0.085	0.110	NA.	NA	NA.	42.6 87.0	55.0 92.5	13 25	154	NA NA	NA NA	NA NA	13 25	154 140						
DECACHLOROBIPHENYL		0.174	0.185	NA	NA	NA	87.0	92.5	25	,-0	144	1974		ا	,,,,		-	I			

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg SURROGATES spiked at .0200 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT

ND = NOT DETECTED
RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

4 10000

ENVIRO	MA TAL SERVICES	
CHAIN	I-OF-CUSTODY RECOR	SD

91684

Project Contact: Burton Turn Around Requirements: Project No.: Project Name: Project No.: Project Name.

AIM-00+ PACOE PROVICK to Signature: NUMBER OF SAMPLES Klingsbiel Erin Klinghard **ADDITIONAL** REQUIREMENTS Comp* Protocol Grab Sample I.D. No. Date Time CWA SW846 700 2 1200 2 200 1200 Relinquished by: Relinquished by: (Signature) Date Time Received by: Date Time Received by: (Signature) (Signature) (Signature) Remarks:

C/c Scaled Samples intent

Cook-temp3 Relinquished by: Received for Laboratory by: Date Time Time (Signature) (Signature) *Homogenize all composite samples prior to analysis

	Work Order	198112	SO Client_U	Kersar-MO	#of S:	amples_6	Due Date_	11/27	Page/	<u> </u>
Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
1,3,4-6	821 TSS	Sur	PS1 1/13/78/31/32		5.116	1019	- m. delareo	Dimpta	حَيْد	Respond
156	80811/KG	SXT	1511-17-88 JAS	WAIK-IN	5/1B	1319]	Divilis 2000	Archive. Dmrssca	3B19 AKW	Archive DISOSIL
62,05,06	47F0	Muleysis	251 MUNIUR 1360	_ V.I	You	Dig	B19 11/38/18 00	achive	Jkn	achise
								·		

KEMRON Environmental Services 109 S lite Park Marietta, Ohio 45750

Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road

Columbia, MD 21045-1934

Login #: L9811292
Report Date: 12/01/98
Work ID: 4119-007/PACOE PEDRICKTOWN

Date Received: 11/17/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9811292-01 L9811292-03 L9811292-05 L9811292-07	WEIR 1116/COMP WEIR 1115 WEIR 1113 BG 1116	L9811292-02 L9811292-04 L9811292-06	WEIR 1116/GRAB WEIR 1114 MIX 1116

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By

Dennis S. Tepe



KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811292-01

Client Sample ID: WEIR 1116/COMP

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/16/98 0930 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	15		5.0	1	N/A	WLT	11/19/98	13:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811292-01

Client Sample ID: WEIR 1116/COMP

Matrix: Water

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

TCLP Extract Date: N/A

Extract Date: 11/19/98
Analysis Date: 11/20/98 Time: 13:37

Dil. Type: N/A COC Info: N/A

Date Collected: 11/16/98

Instrument: HP10

Analyst: CDB Lab File ID: 057R0101

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8082/3550 Run ID: R56866 Batch : WG49595

DOMES!

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	42.0 34.7	(13 - 154%) (25 - 140%)			

cuscosida

TCLP Extract Date: N/A

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-01 Client Sample ID: WEIR 1116/COMP

Extract Date: 11/19/98

Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Analysis Date: 11/24/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/16/98

% Solid: N/A

Instrument: HP9 Analyst: ECL

Method: 8081A\3510C Run ID: R56837

Lab File ID: 1466

Batch: WG49716

	Units	Result	Qualifiers	RL	Dilution	
(C	*** /*	- · · · · · · · · · · · · · · · · · · ·				
i	/ -			0.05	1	
ic	nā/r				1	
or	ug/L			0.05	1	
i e				0.05	1	
or enovide				0.05	1	
an Ti	πā\'̄Γ			0.05	1	
	ug/L			0.05	ī	
	ug/L		ND		ī	
• • • • • • • • • • • • • • • • • • • •			ND .		ī	
**************************************	ug/L		ND		ĩ	
G11 TT	ug/L		ND		ī	
**************************************	ug/L		ND		ī	
an surface	ug/L		ND		ī	
* * * * * * * * * * * * * * * * * * *	ug/L		ND		- - -	
MIOF	ug/L		ND		ī	
etone	ug/L		ND		ï	
raenyae	ug/L		ND		7	
lordane	ug/L		ND		î	
lordane	110 /T.		ND		ī	
<u> </u>	uq/L		ND		Ť	
C (Lindane)	ug/L				· 1	
	- •		- · -	3.05	•	
Percent Recovery:						
retrachloro-m-xylene	40.	3 (1	3 - 154%)			
robiphenyl						
	or epoxide an I. an II. an sulfate hlor etone ldehyde lordane lordane e	IC	C		Control Cont	Control Cont

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-02 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A Client Sample ID: WEIR 1116/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Date Collected: 11/16/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS5 Method: 8270C\3510C

Extract Date: N/A Analyst: MDC Run ID: R56578

Bat

Analysis Date: 11/20/98 Time: 15:52 Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	10	2
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10	$\overline{2}$
95-57-8	2-Chlorophenol	ug/L	ND	īŏ	$\bar{\mathbf{z}}$
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	$\bar{2}$
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	$\tilde{\mathbf{z}}$
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2
95 - 48-7	2-Methylphenol	ug/L	ND	10	2
108-60 -1	bis(2-Chloroisopropyl)ether	ug/L	ND	10	2
106-44-5	4-Methylphenol	ug/L	ND	10	2
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2
67-72 -1	Hexachloroethane	ug/L	ND	10	2
98-95-3	Nitrobenzene	ug/L	ND	10	2
78-59-1	Isophorone	ug/L	ND	10	2
88-75-5	2-Nitrophenol	uq/L	ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2
111-91-1	Bis(2-Chloroethoxy)Methane	ug/L	ND	10	2
120-83-2	2.4-Dichlorophenol	ug/L	ND	10	2
120-82-1	1,2,4-Trichlorobenzene	uq/L	ND	10	2
91-20-3	Naphthalene	ug/L	ND	10	2
106-47-8	4-Chloroaniline	ug/L	ND	10	2
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2
88-74-4	2-Nitroaniline	ug/L	ND	50	2
131-11-3	Dimethylphthalate	ug/L	ND	10	2
208-96-8	Acenaphthylene	ug/L	ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2
99-09-2	3-Nitroaniline	ug/L	ND	50	2
83-32-9	Acenaphthene	ug/L	ND	10	2
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2
100-02-7	4-Nitrophenol	ug/L	ND	50	2
132-64-9	Dibenzofuran	ug/L	ND	10	2
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2
84-66-2	Diethvlphthalate	ug/L	ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2

RL = Reporting Limit

Page 4 of 12

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-02 Client Sample ID: WEIR 1116/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/16/98 % Solid: N/A

Instrument: HPMS5 Method: 8270C\3510C

Ba

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 11/20/98 Time: 15:52 Analyst: MDC Run ID: R56578 Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7	Fluorene	/T				
100-01-6	4-Nitroaniline	ug/L	•	ND	10	2
534-52-1	4,0-Difficio-2-merny(nheno)	ug/L		ND	50	2
86-30-6		ug/L		ND	50	2
101-55-3	4-Bromophenyl-phenylether.	ug/L		MD	10	2
118-74-1	Hexachlorobenzene	ug/L		ND	10	2
87-86-5	Pentachlorophenol	ug/L		ND	10	2
85-01-8	Phenanthrene	ug/L		MD	50	2
120-12-7	Anthracene	ug/L		MD	10	2
86-74-8	Cardazoie	ug/L		MD	10	2
84-74-2	Di-N-Butylphthalate	ug/L		MD	10	2
206-44-0	Fluoranthene	ug/L		ΝĎ	10	2
129-00-0	PVrene	ug/L		йD	10	2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine	ug/L		ИD	10	2
91-94-1	3,3'-Dichlorobenzidine	ug/L		йD	10	2
56 <i>-</i> 55 - 3	benzo (a) anchracene	ug/L		ИD	20	2
218-01-9	Chrysene. bis(2-Ethylhexyl)phthalate.	ug/L ug/L		ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L		ND	10	2
117-84-0	Di-n-octylphthalate	ug/L ug/L		ND	10	2
205-99-2	Benzo(D)Iluoranthene			ND	10	2
207-08-9	Benzo(k) fluoranthene	ug/L ug/L		ND	10	2
50-32-8	Benzo (a) pyrene	ug/L		ND	10	2
193-39-5	Indeno(1,2,3-cd)pyrene	ug/L		ИD	10	2
53-70-3	Dibenzo(a,h)Anthracene	119/L		ND	10	2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ИD	10	2
		ug/L		ND	10	2
SURR	GATES- In Percent Recovery:					
	2-Fluorophenol	39.8	1	21 - 100%)		
	Phenol-d5	24.5		10 - 94%)		
	Nitrobenzene-d5.	57.1	,	35 - 114%)		
	2-Figoropiphenvi	64.2		43 - 116%)		
	2,4,6-Tribromophenol.	117		10 - 123%)		
	p-Terphenyl-d14	78.6	,	10 - 123%) 33 - 141%)		
	##gm ===++++++++++++++++++++++++++++++++++	,0.0	ι .	33 - T#T2/		

KEMRON ENVIRONMENTAL SERVICES

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811292-02 Client Sample ID: WEIR 1116/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water

Date Collected: 11/16/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS1 Method: 8260B Extract Date: N/A Run ID: R56759

Analyst: SLT Lab File ID: 1VR29868 Analysis Date: 11/23/98 Time: 16:40 Batch: WG49687

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	-
74-87-3	Chloromethane	ug/L		ND	10	٦	
74 - 83-9	Bromomethane	ug/L		ND	10	Ť	
75-01-4	Vinyl chloride	ug/L		ND	10	า๋	
75-00-3	Chloroethane	ug/L		ND	10	Ť	
75-09-2	Methylene chloride	ug/L		ND	5.0	1	
67-64-1	Acetone	ug/L	12	110	10	1	
75-15-0	Carbon disulfide	ug/L	12	ND	5.0	1	
75-3 5- 4	1,1-Dichloroethene	ug/L		ND	5.0	ī	
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	ĩ	
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	ī	
67-66-3	Chloroform	ug/L		ND	5.0	ī	
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	ī	
78-93-3	2-Butanone	ug/L		ND	10	ī	
71-55-6	1,1,1-Trichloroethane	ug/L	•	ND	5.0	ī	
56 - 23-5	Carbon tetrachloride	ug/L		ND	5.0	ī	
75-27-4	Bromodichloromethane	ug/L		ND	5.0	ī	
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	ī	
10061-01-5	Cis-1,3-Dichloropropene	ug/L		ND	5.0	1	
79-01-6	Trichloroethene	ug/L		ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1	
71-43-2	Benzene	ug/L		ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1	
75-25-2	Bromoform	uq/L		ND	5.0	1	
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1	
591-78-6	2-Hexanone	ug/L		ND	10	1	
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1	
108-88-3	Toluene	ug/L		ND	5.0	1	
108-90-7	Chlorobenzene	ug/L		ND	5.0	1	
100-41-4	Ethyl benzene	ug/L		ND	5.0	1	
100-42-5	Styrene	ug/L		ND	5.0	1	
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1	
SURR	OGATES- In Percent Recovery:						
	Dibromofluoromethane	105	(86 - 118%)			
	Toluene-d8	108	}	88 - 110%)			
	p-Bromofluorobenzene	102	į	86 - 115%)			
	1,2-Dichloroethane-d4	īiī	į	80 - 120%)			
	•	- -					

Login #L9 292 December 1, 1998 12:36 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9811292-03 Client Sample ID: WEIR 1115 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/15/98 0930 COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method	
Total Suspended Solids	mg/L	14		5.0	1	N/A	TJW	11/19/98	13:00	160.2	

Lab Sample ID: L9811292-04 Client Sample ID: WEIR 1114 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/14/98 0930 COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method	_
Total Suspended Solids	mg/L	16		5.0	1	N/A	TJW	11/19/98	13:00 160.2	

Lab Sample ID: L9811292-05 Client Sample ID: WEIR 1113 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/13/98 0930 COC Info: N/A

Analyte	Units		Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method	
Total Suspended Solids	mg/L	18		5.0	1	N/A	TJW	11/19/98	13:00	160.2	

Lab Sample ID: L9811292-06 Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water Collected: 11/16/98 1000 COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time M	ethod
Total Suspended Solids	mg/L	19		5.0	1	N/A	WLT	11/19/98	13:00 1	60.2

Login #L9811292 December 1, 1998 12:36 pm

TCLP Extract Date: N/A

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811292-06

Extract Date: 11/19/98

Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Analysis Date: 11/20/98 Time: 14:13

Matrix: Water

Date Collected: 11/16/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HP10

Method: 8082/3550 Run ID: R56866

Analyst: CDB Lab File ID: 058R0101

Batch : WG49595

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURF	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	49.1 47.9	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-06

Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Extract Date: 11/19/98
Analysis Date: 11/24/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/16/98

% Solid: N/A

TCLP Extract Date: N/A Instrument: HP9

Method: 8081A\3510C

Analyst: ECL Lab File ID: 1467 Run ID: R56837

Batch : WG49716

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
319-85-7 319-86-8 76-44-8	alpha-BHC. beta-BHC. delta-BHC. Heptachlor. Aldrin. Heptachlor epoxide. Endosulfan I.	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.05 0.05 0.05 0.05 0.05 0.05	1 1 1 1 1 1	

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811292-06 Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/19/98
Analysis Date: 11/24/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/16/98

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C Run ID: R56837

Analyst: ECL Lab File ID: 1467

Batch: WG49716

CAS #	Compound	Units	Result Qualifiers	RL.	Dilution
60-57-1 72-55-9 72-20-8 33213-65-9 72-54-8 1031-07-8 50-29-3 72-43-5 53494-70-5 7421-93-4 5103-71-9	Dieldrin 4,4'-DDE Endrin Endosulfan II 4,4'-DDD Endosulfan sulfate 4,4'-DDT Methoxychlor Endrin ketone Endrin aldehyde alpha Chlordane	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND ND ND	0.10 0.10 0.10 0.10 0.10 0.10 0.50 0.10	1 1 1 1 1 1 1 1
5103-74-2 8001-35-2 SURR	gamma Chlordane Toxaphene gamma-BHC (Lindane) OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl.	ug/L ug/L ug/L ug/L	ND ND ND ND (13 - 154%) (25 - 140%)	0.05 0.05 1.0 0.05	1 1 1

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-06 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Client Sample ID: MIX 1116
Site/Work ID: 4119-007/PACOE PEDRICKTOWN Extract Volume: N/A

Matrix: Water Date Collected: 11/16/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HPMS5

Method: 8270C\3510C Run ID: R56578 Extract Date: N/A Analyst: MDC

Bat

Analysis Date: 11/20/98 Time: 16:32 Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	īŏ	2	
95-57-8	2-Chlorophenol	ug/L	ND	ĩo	Ž	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	ĩŏ	2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	īŏ	$\bar{2}$	
106-44-5	4-Methylphenol N-Nitroso-di-n-propylamine	ug/L	ND	10	$\bar{2}$	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	$\bar{2}$	
67-72-1	Hexachloroethane	ug/L	ND	10	ž	
98-95-3	Nitrobenzene	ug/L	ND	10	$\bar{2}$	
78-59-1	Isophorone	ug/L	ND	10	$\bar{2}$	
88-75-5	2-Nitrophenol	ug/L	ND	10	$\bar{\mathbf{z}}$	
105-67-9	2,4-Dimethylphenol	ug/L	ND	īŏ	<u>-</u> 2	
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	10	$\bar{2}$	
120-83-2	2.4-Dichlorophenol	ug/L	ND	10	$\bar{2}$	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	$\bar{\mathbf{z}}$	
91-20-3	Naphthalene	ug/L	ND	10	$\bar{\mathbf{z}}$	
106-47-8	4-Chloroaniline	ug/L	ND	10	$\bar{\mathbf{z}}$	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	$\bar{2}$	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	īŏ	$\bar{\mathbf{z}}$	
91-57-6	2-Methylnaphthalene	ug/L	ND	ïŏ	$\bar{2}$	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	$\overline{2}$	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	$\overline{2}$	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	$\bar{2}$	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	$\bar{2}$	
88-74-4	2-Nitroaniline	ug/L	ND	50	$\bar{2}$	
131-11-3	Dimethylphthalate	ug/L	ND	10	$\overline{2}$	
208-96-8	Acenaphthylene	ug/L	ND	10	$\overline{2}$	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	$\bar{\mathbf{z}}$	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	$\tilde{2}$	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	$\bar{2}$	
100-02-7	4-Nitrophenol	ug/L	ND	50	Ž	
132-64-9	Dibenzofuran	ug/L	ND	ĬŎ	Ž	
121-14-2	2.4-Dinitrotoluene	ug/L	ND	īŏ	$\bar{2}$	
84-66-2	Diethylphthalate	ug/L	ND	10	$\bar{2}$	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	$\bar{2}$	

RL = Reporting Limit

TCLP Extract Date: N/A

Extract Date: N/A

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811292-06 Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Date Collected: 11/16/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS5

Method: 8270C\3510C

Βa

Analyst: MDC

Run ID: R56578 Lab File ID: 8690.D,8697.D,8691.D,8695.D,8692.D,8693.D

Analysis Date: 11/20/98 Time: 16:32

CAS #	Compound .	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L	NT		
100-01-6	**NICIOANIIINE	='/+	ND	10	2
534-52-1	T/OTDINILLOTZ-MECNVIDNANAI	11 m / T	ND	50	2
86-30-6	N-NICIOSOGIONENVIAMINA	/T	ND	50	2
101-55-3	3-DIOMODIENVI-DRENVIETNEY	11 ~ /7	ND	10	2
118-74-1	ACXACALOFODenzene	ug/L	ND	10	2
87-86-5	rentachiorophenoi	ug/L	ND	10	2
85-01-8	rienanciitelle	ug/L	ND	50	2
120-12-7	Authracene	ug/L	ND	10	2
86-74-8	Calbazole		ND	10	2
84-74-2	DI-N-BUCYIDACAAIATE	ug/L	ND	10	2
206-44-0	Fluoranthene	ug/L	ND	10	2
129-00-0		ug/L	ND	10	2
85-68-7	Butylbenzylphthalate	ug/L ug/L	ND	10	2
91-94-1	3,3'-Dichlorobenzidine	119/E	ND	10	2
56-55-3	Benzo(a) anthracene	ug/L	ND	20	2
218-01-9	Chrysene.	ug/L	ND	10	2
117-81-7	bis(2-Ethylhexyl)phthalate	ug/L	ND	10	2
117-84-0	Ul-D-OCEVIDAENSISTA	ug/L	ΝD	10	2
205-99-2	Benzo (b) fluoranthene	ug/L	ND	10	2
207-08-9	Benzo(k) fluoranthene	ug/L	MD	10	2
50-32-8	Denzotainvrene	ug/L	ND	10	2
193-39-5	Indeno (1,2,3-cd) pyrene. Dibenzo (a,h) Anthracene. Benzo (a, h) Romalane.	ug/L	ЙD	10	2
53-70-3	Dibenzo (a. h) Anthracene	ug/L	ND	10	2
191-24-2	Benzo(g,h,i) Perylene	ug/L	ND	10	2
	Jones (3) m/ 1/ For y tene	ug/L	ND	10	2
SURRO	OGATES- In Percent Recovery:				
	2-Fluorophenol	43.5	(
	Phenol-d5	41.5	(21 - 100%)		
	Nitrobenzene-d5	24.5	(10 - 94%)		
	2-Fluorohiphenyl	62.3	(35 - 114%)		
	2-Fluorobiphenyl. 2,4,6-Tribromophenol.	67.9	(43 - 116%)		
	n-Ternhenyl -d1/	109	(10 - 123%)		
	p-Terphenyl-d14	93.9	(33 - 141%)		

Login #L9811292 December 1, 1998 12:36 pm

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9811292-06 Client Sample ID: MIX 1116 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Date Collected: 11/16/98

TCLP Extract Date: N/A Extract Date: N/A Method: 8260B Instrument: HPMS1 Run ID: R56759 Batch: WG49687 Analyst: SLT Lab File ID: 1VR29869 Analysis Date: 11/23/98 Time: 17:22

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/L	ND	10	1	
74-83-9	Bromomethane	ug/L	ND	10	1	
75-01-4	Vinyl chloride	ug/L	ND	10	1	
75-00-3	Chloroethane	ug/L	ND	10	1	
75-09-2	Methylene chloride	uq/L	ND	5.0	1	
67-64-1	Acetone	ug/L	14	10	1	
75-15-0	Carbon disulfide	ug/L	ND	5.0	1	
75-35-4	1,1-Dichloroethene	uq/L	ND	5.0	1	
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	1	
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	1	
67-66-3	Chloroform	ug/L	ИĎ	5.0	1.	
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	<u> </u>	
78-93-3	2-Butanone	ug/L	ND	10	<u> </u>	
71-55-6	1,1,1-Trichloroethane	ug/L	ND	5.0	1	
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	<u> </u>	
75-27-4	Bromodichloromethane	ug/L	ЙD	5.0	<u>.</u>	
78 - 87-5	1,2-Dichloropropane	ug/L	йD	5.0 5.0	<u>.</u>	
10061-01-5	cis-1,3-Dichloropropene	ug/L	йD	5.0 5.0	1	
79-01-6	Trichloroethene	ug/L	ND	5.0 5.0	†	
124-48-1	Dibromochloromethane	ug/L	ND	5.0	. 🕇	
79-00-5	1,1,2-Trichloroethane	ug/L	ND	5.0	i	
71-43-2	Benzene	ug/L	ND ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND ND	5.0	า๋	
75-25-2	Bromoform	ug/L	ND ND	10	ī	
108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	ī	
591-78-6	2-Hexanone	ug/L	ND	5.0	ī	
127-18-4	Tetrachloroethene	ug/L	ND ND	5.0	ī	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	ī	
108-88-3	Toluene	ug/L	ND ND	5.0	ī	
108-90-7	Chlorobenzene	ug/L	ND	5.0	ī	
100-41-4	Ethyl benzene	ug/L	ND ND	5.0	ī	
100-42-5	Styrene	ug/L	ND .	5.0	ī	
1330-20-7	Xylenes, Total	ug/L	MD	5.0		
SURR	OGATES- In Percent Recovery:					
	Dibromofluoromethane	106	(86 - 118%)			
	Toluene-d8	107	(88 - 110%)			
	p-Bromofluorobenzene	102	(86 - 115%)			
	1,2-Dichloroethane-d4	111	(80 - 120%)			

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work			Dil			Date	
Group	Run ID	Sample	Type Matrix	Product	Method	Collected	Department
WG49510	R56578	L9811292-02	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49510	R56578	L9811292-06	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49575	R56837	L9811292-01	Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Extraction
WG49575	R56837	L9811292-06	Water	Organochlorine Pesticides		16-NOV-1998	Extraction
WG49576	R56866	L9811292-01	Water	PCB's (Water)	8082/3550	16-NOV-1998	Extraction
WG49576	R56866	L9811292-06	Water	PCB's (Water)	8082/3550	16-NOV-1998	Extraction
WG49595	R56866	L9811292-01	Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49595	R56866	L9811292-06	Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49605	R56624	L9811292-01	Water	Total Suspended Solids	160.2	16-NOV-1998	Conventionals
WG49605	R56624	L9811292-03	Water	Total Suspended Solids	160.2	15-NOV-1998	Conventionals
WG49605		L9811292-04	Water	Total Suspended Solids	160.2	14-NOV-1998	Conventionals
WG49605		L9811292-05	Water	Total Suspended Solids	160.2	13-NOV-1998	Conventionals
WG49605	R56624	L9811292-06	Water	Total Suspended Solids	160.2	16-NOV-1998	Conventionals
WG49665		L9811292-02	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49665	R56578	L9811292-06	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49687	R56759	L9811292-02	Water	TCL Volatiles	8260B	16-NOV-1998	Volatile - GC/MS
WG49687	R56759	L9811292-06	Water	TCL Volatiles	8260B	16-NOV-1998	Volatile - GC/MS
WG49716	R56837	L9811292-01	Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC
WG49716	R56837	L9811292-06	Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC -- Ann L. Clark BAD - Becky A. Diehl CEB - Chad E. Barnes CDB .. Christy D. Burton CMS - - Crystal M. Stevens CRC -- Carla R. Cochran DIH -- Deanna I. Hesson DKM - -Dewey K. Miller DLN -Deanna L. Norton Dorothy L. Payne DLP .. ECL --Eric C. Lawson Fay E. Harmon Hema Vilasagar HV --Janice L. Holland John W. Richards JWR --JYH -- Ji Y. Hu KHA - - Kim H. Archer KMS .. Kevin M. Stutler VC KRA -- Kathy R. Albertson MDA - Mike D. Albertson

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KEMRON En Conmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	fier Description		Qualifier	Description
(A)	See the report narrative	e	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	e	NA	Not applicable
(C)	See the report narrative		ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient	for the MSA is less than 0.995	NF	Not found
<	Less than		NFL	No free liquid
>	Greater than	•	NI	Non-ignitable
В	Present in the method b		NR	Analyte is not required to be analyzed
C	Confirmed by GC/MS		NS	Not spiked
*	Surrogate or spike com	pound out of range	P	Concentration > 25% difference between the two GC
				columns
CG	Confluent growth		QNS	Quantity not sufficient to perform analysis
D		fied at a secondary dilution factor	R	Analyte exceeds regulatory limit
DL	Surrogate or spike was		RA	Reanalysis confirms reported results
E		n due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F		reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid		SMI	Sample matrix interference on surrogate
I		, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal		TNTC	Too numerous to count
L		elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection pred	cision not met	W	Post-digestion spike for furnace AA out of control limits
			X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC



IN ENVIRONMENTAL SERVICES ALLEY LABORATORY QUALITY CONTROL SUMMARY

WORKGROUP:

wq49605

RUN DATE: 11/19/98

METHOD:

160.2

ANALYST: liw

MATRIX: UNITS: Water ma/L

DUPLICATE: 11-315-04

								· · · · · · · · · · · · · · · · · · ·					ENT REC	_		PERCEN	T RPD
ANALYTE	RDL	Blank	TLCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	REP RPD	RPD UCL
TSS	5.00	ND	50.00	48.00	9900.00	10100.00	NR	NR	NR	96.0	81.0	114.5	NR	NR	NR	2.00	20.00

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA = NOT APPLICABLE

ND = NOT DETECTED

NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T- LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL ≈ LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



N ENVIRONMENTAL SERVICES - OVL **VOLATILE QUALITY CONTROL SUMMARY**

Workgroup #: WG49687

Method: 8260A Run Date: 11/23/98

LCS2 FLNM:

LCS DF:

Instrument ID: HPMS_1

SMPL Num: 11-303-09

NA

SMPL DF:

Matrix: Water Units: ug/L

BLK FLNM: 1BK29858 BLK2 FLNM: NA

SMPL FLNM: 1AM29861 MS FLNM: 1AM29862 MS DF:

1

MSD FLNM: 1AM29863

MSD DF:

LCS FLNM: 1QC29859

						CONCENTRA	TION, PPB							PERCI	ENT REC	OVERY			PERCEN	IT RPD
						LCS Spike				MS Spike			LCS	LCS			MS	MS	MŞ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Lovel	SMPL	MS	MSD	Level	rcs	LCS2	LCL	UCL	мѕ	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	սց/Լ	ug/L	%	%	%	- %	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND:	12.9	NA	20.0	ND:	12.2	12,5	20.0	64.5	NA:	0,86	148.0	61.0	62.5	60.0	140.0	2.4	20.0
chloromethane	10.0	ND	ND	15.5	NA	20.0	ND	14.6	14.5	20.0	77,5	NA	56.0	132.0	73.0	72.5	D	273.0	0.7	20.0
vinyl chloride	10.0	ND	ND	17.3	NA	20.0	ND	16.3	16,7	20.0	86.5	NA	68.0	125.0	81.5	83,5	D	251,0	2.4	20.0
bromomethane	10.0	ND	ND	17.1	NA	20.0	ND	17.3	17.8	20.0	85,5	NA	55.0	138.0	86.5	89.0	D	242.0	2.8	20.0
chloroethane	10.0	ND	ND	17.7	NA	20.0	ND	17.1	17,1	20.0	88.5	NA	57.0	128.0	85.5	85.5	14.0	230,0	0.0	20,0
trichlorofluoromethane	10.0	ND	ND	15.5	NA	20.0	ND	15,1	15.8	20.0	77.5	NA	70.0	127.0	75.5	79.0	17.0	181,0	4.5	20.0
freon 113	NTC	ND	ND	NA	NA	20.0	ND	NA.	NA	20.0	NΑ	NA	NA	NA	NA	NA	70.0	130.0	NA	20.0
acetone	100.0	ND	ND	18.0	NA	20.0	ND	20.6	20.5	20.0	90.0	NA	44.0	114.0	103.0	102.5	70.0	130.0	0.5	20.0
1,1-dichloroathene	5.0	ND	ND	20.1	NA	20.0	ND	19.5	20.1	20.0	100.5	NA:	69.0	144.0	97.5	100.5	۵	234,0	3.0	20,0
iodomethane	NTC	ND	ND	15.5	NA	20.0	ND	15.9	12.9	20.0	77,5	NA	NA	NA	79.5	64.5	70.0	130.0	20.8	20.0
methylene chloride	5.0	ND	ND:	25.1	NA.	20.0	ND	23.8	21.7	20.0	125.5	NA.	71.0	128.0	119.0	108,5	D	221.0	9,2	20.0
carbon disulfide	5.0	ND	ND	20.2	NA	20.0	ND	20.5	19.3	20.0	101.0	NA	67.0	136.0	102.5	96.5	70,0	130.0	6.0	20.0
acrylonitrile	NTC	ND.	ND	NA	NA	20.0	ND	NA	NA	20.0	NA	NA	NA	NA	NA	NA	70.0	130.0	NA	20,0
trans-1,2-dichloroethene	5.0	ND	ND	21.6	NA	20.0	ND	21.3	21.6	20.0	108.0	NA	85.0	133,0	106.5	108,0	54.0	156.0	1.4	20.0
vinyl acetate	10.0	ND	ND	20.5	NA	20.0	ND	21.1	20.4	20.0	102.5	NA	9.0	236.0	105.5	102.0	9.0	236,0	3,4	20.0
1,1-dichloroethane	5.0	ND	ND	21,2	NA	20.0	ND	20.8	21.4	20.0	106.0	NA	82.0	124.0	104.0	107.0	59.0	155.0	2,8	20.0
2-butanone	0,001	ND	ND:	19.4	NA	20.0	ND	22.0	21.4	20,0	97.0	NA:	43.0	140.0	110.0	107.0	70,0	130,0	2,8	20,0
2,2-dichloropropane	5.0	ND	ND	19.7	NA	20.0	ND	19.0	20.4	20.0	98.5	NA	77.0	126.0	95.0	102.0	60.0	140.0	7.1	20.0
cis-1,2-dichloroethene	5.0	ND	ND	19.5	NA	20.0	ND	18.7	19,3	20,0	97.5	NA	69,0	130.0	93,5	96,5	60.0	140,0	3,2	20,0
chloroform	5.0	ND	ND	20,5	NA	20.0	ND	19.9	20.6	20.0	102.5	NA	83.0	121.0	99.5	103,0	51.0	138.0	3.5	20.0

Notes and Definitions:

RDL= Reporting Detection Limit

ND = Not Detected NA = Not Applicable

BLK = Method Blank

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49687

Run Date: 11/23/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Matrix: Water

Instrument ID: HPMS_1

SMPL Num: 11-303-09

SMPL DF:

Units: ug/L

BLK FLNM: 1BK29858 BLK2 FLNM:

SMPL FLNM: 1AM29861 MS FLNM: 1AM29862

MS DF: MSD DF:

LCS FLNM: 1QC29859

NA

MSD FLNM: 1AM29863

					C	ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCE	NT RPD
						LCS Spike			-	MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.1	NA	20.0	ND	18.8	18.7	20.0	100.5	NA	85.0	118,0	94.0	93.5	60.0	140.0	0.5	20.0
1,1,1-trichlomethane	5.0	ND	QN	19.6	NA	20.0	ND	19,2	19.9	20.0	98.0	NA	74.0	125,0	96.0	99,5	52.0	162,0	3.6	20.0
1,1-dichloropropene	5.0	ND	ND	21.9	NA	20.0	ND	21.5	22.8	20.0	109.5	NA	85.0	126.0	107.5	114.0	60.0	140.0	5.9	20.0
carbon tetrachloride	5.0	ND	ND	19.5	NA	20.0	ND	18.8	19.9	20.0	97.5	NA .	73.0	129.0	94.0	99.5	70.0	140.0	5.7	20.0
1,2-dichloroethane	5.0	ND	ND	20.4	NA	20,0	ND	19.8	20.2	20.0	102.0	NA	76.0	123.0	99.0	101.0	49.0	155.0	2,0	20.0
benzene	5.0	ND	ND	20.0	NA	20,0	ND	19,6	20.6	20.0	100.0	NA	86.0	118.0	98.0	103.0	37,0	151.0	5.0	20,0
trichloroethene	5.0	ND	ND	19.3	NA	20.0	ND	18.3	19.7	20.0	96.5	NA	82.0	120.0	91.5	98.5	71.0	157.0	7.4	20,0
1,2-dichloropropane	5.0	ND	ND:	20.2	NA .	20.0	ND	19,9	20,4	20.0	101.0	NA	74.0	126,0	99.5	102.0	D .	210.0	2.5	20.0
bromodichioromethane	5.0	ND	ND	19.9	NA	20.0	ND	18.8	19.7	20.0	99.5	NA	74.0	126.0	94.0	98.5	35.0	155.0	4.7	20.0
dibromomethane	5.0	ND	ND	20.1	NA	20.0	ND	19.2	20.0	20.0	100,5	NA	78.0	125,0	96.0	100,0	60,0	140.0	4.1	20.0
2-chloroethylvinyl-ether	10.0	ND	ND	17.5	NA	20.0	ND	ND	ND	20.0	87.5	NA	50.0	151.0	NA	NA	70.0	130.0	ND	20.0
4-methyl-2-pentanone	10.0	ND	ND	19.1	NA	20.0	ND	18.2	19.0	20,0	95,5	NA	79.0	127,0	91.0	95.0	70,0	130.0	4,3	20.0
cis-1,3-dichloropropene	5.0	ND	ND	20.0	NA	20.0	ND	19.2	20.0	20.0	100.0	NA	77.0	123.0	96.0	100.0	D	227.0	4.1	20.0
toluene	5.0	ND	ND	19.8	NA	20.0	ND	19,5	20,8	20.0	99.0	NA .	93:0	119,0	97.5	104,0	47.0	150.0	6,5	20.0
trans-1,3-dichloropropens	5.0	ND	ND	19.6	NA	20.0	ND	18.9	19.8	20.0	98.0	NA	74.0	124.0	94.5	99.0	17.0	183.0	4.7	20,0
1.1,2-trichloroethane	5.0	ND	ND	19.8	NA	20.0	ND	18,9	20.3	20,0	99.0	NA	72.0	119,0	94.5	101,5	52,0	150.0	7.1	20.0
2-hexanone	10.0	ND	ND	19.6	NA	20.0	ND	19.5	20.5	20.0	98.0	NA	55.0	114.0	97.5	102.5	70.0	130.0	5.0	20.0
1,3-dichioropropane	5.0	ND	ND	20.4	NÄ	20,0	ND	19.4	20,7	20.0	102.0	NA	73.0	122.0	97.0	103.5	60.0	140,0	6,5	20,0
tetrachloroethene	5.0	ND	ND	19.3	NA	20.0	ND	18.8	20.3	20.0	96.5	NA	82.0	120.0	94.0	101.5	64.0	148.0	7.7	20.0
dibromochloromethans	5.0	ND	ND	19.1	NA	20.0	ND	18.1	19.3	20.0	95.5	NA	72.0	121.0	90.5	96.5	53.0	149.0	6.4	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

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LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ON ENVIRONMENTAL SERVICES - OVL **VOLATILE QUALITY CONTROL SUMMARY**

NA

Page 3 of 4 M8260A 1112398W.XLS

Workgroup #: WG49687

Run Date: 11/23/98

LCS2 FLNM:

LCS DF:

Method:

8260A

Instrument ID: HPMS_1

SMPL Num: 11-303-09

SMPL DF:

Matrix: Water

BLK FLNM: 1BK29858

SMPL FLNM: 1AM29861

MS DF:

Units: ug/L

BLK2 FLNM: NA MS FLNM: 1AM29862

LCS FLNM: 1QC29859

MSD DF:

MSD FLNM: 1AM29863

	1					ONCENTRA	TION, PPB							PERC	ENT REC	COVERY			PERCE	NT RP
-]				LCS Spike	·			MS Spike			LCS	LÇS		***************************************	MS	MS	MS	RI
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	_M\$	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	U
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	սց/Լ	ug/L	%	%	%	%	%	%	%	%	%	
1,2-dibromoethane	5.0	ND	ND	19.0	NA	20.0	ND	18.5	19.6	20.0	95.0	NA	75.0	121.0	92.5	98.0	60.0	140.0	5.8	20
chlorobenzene	5.0	ND	ДN	20.1	NA	20.0	ND	19.8	20.B	20.0	100.5	NA	83.0	120.0	99.0	104.0	37.0	160.0	4.9	2
,1,1,2-tetrachioroethane	5.0	ND	ND	19.0	NA	20.0	ND	18.4	19.2	20.0	95.0	NA	79.0	118.0	92.0	96.0	60.0	140.0	4.3	20 20
ethylbenzene	5.0	ND	ND	20.0	NA	20.0	ND	19.9	20,9	20.0	100.0	NA	82.0	119.0	99.5	104.5	37.0	162.0	4.9	2
m + p-xylene	5.0	ND	ND	40,7	NA	40.0	ND	39.5	42.6	40.0	101.8	NA	81.0	121.0	98.8	106.5	60.0	140.0	7.6	20
o-xylene	5,0	ND.	ND	20.2	NA	20.0	ND	19.4	20.7	20,0	101.0	NA	81.0	199.0	97.0	103.5	60.0	140.0	6.5	2
\$tyrene	5.0	ND	ND	19.8	NA	20.0	ND	19,1	20.1	20.0	99.0	NA	81.0	11B.0	95.5	100.5	60.0	140.0	5.1	2·
bromoform	5.0	ND	ND	17,5	NA	20.0	ND	16.7	17.9	20.0	87.5	NA	68.0	129.0	83.5	89.5	45.0	169.0	6.9	21
isopropylbenzene	5.0	ND	ND	20.2	NA	20.0	ND	19.9	21,0	20.0	101.0	NA	81.0	121.0	99.5	105.0	60.0	140.0	5.4	30 50 21
, 1, 2, 2-tetrachloroethane	5.0	ND	ND	19.6	NA	20.0	ND	19.2	20.6	20.0	98.0	NA	61.0	137.0	96.0	103.0	46.0	157.0	7.0	2
1,2,3-trichloropropane	5.0	ND	ND	18,1	NA	20.0	ND	16.9	19.7	20.0	90.5	NA	72.0	130.0	84.5	98.5	60.0	140.0	15.3	s./00u/000u
ns-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20,0	ND	NA	NA:	20.0	NA	NA.	NA.	NA.	NA.	NA NA	NA	NA.	NA	20 42
propyl-benzene	5.0	ND	ND	19.8	NA	20.0	ND	19.2	20.9	20.0	99.0	NA	69.0	135.0	96.0	104.5	60.0	140.0	8.5	20 20
bromobenzene	5.0	ND	ND	18.4	NA	20.0	ND	17.2	19.2	20.0	92.0	NA	86.0	118.0	86.0	96.0	60.0	140.0	88990000000000	996966
1,3,5-trimethylbenzene	5.0	ND	ND	19.1	NA	20.0	ND	18,7	20.2	20.0	95.5	NA NA	83.0	121.0	93.5	101.0	60.0	000000000000000000000000000000000000000	11.0	20
2-chlorotoluene	5.0	ND	ND	18.9	NA	20.0	ND	17.7	20.4	20.0	94.5	NA .	80.0	126.0	88.5	102.0	60.0	140.0	7.7	20 2.
4-chiorotoluene	5.0	ND	ND	20.4	NA	20.0	ND	20.2	20.6	20.0	102.0	NA	80.0	125.0	101.0			140,0	14:2	20
tert-butyl-benzene	5.0	ND	ND	19.3	NA	20.0	ND	18.9	20.3	20.0	98.5	NA .	79.0	88878888888 20888	0000000000000000	103.0	60.0	140.0	2.0	20
1,2,4-trimethylbenzene	5.0	ND	ND	19.7	NA	20.0	ND	000000000000000000000000000000000000000	ANTENOONE A	000000000000000000000000000000000000000			\$4.005.0050000	114.0	94.5	101.5	60,0	140.0	7.1	20
sec-butyl-benzene	5.0	ND	ND	19.6	NA NA	20.0	ND ND	19.0 19.2	20.5 20.6	20.0	98.5	NA	84.0	121.0	95.0	102.5	60.0	140.0	7.6	20

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

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LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

8260

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49687

Run Date: 11/23/98

LCS2 FLNM: NA LCS DF:

Method:

8260A

Instrument ID: HPMS 1

SMPL Num: 11-303-09

SMPL DF:

Matrix: Water

BLK FLNM: 1BK29858 BLK2 FLNM:

SMPL FLNM: 1AM29861

MS DF:

Units:

ug/L

NA

MS FLNM: 1AM29862

MSD DF:

LCS FLNM: 1QC29859

MSD FLNM: 1AM29863

						CONCENTRA	TION, PPB							PERCE	NT RECO	OVERY			PERCEN	IT RPD
						LCS Spike		<u>-</u>		MS Spike			LCS	LCS			MS	MS	мѕ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	96	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	19.1	NA	20.0	ND	18.6	19.9	20.0	95.5	NA	80.0	119.0	93.0	99.5	60.0	140.0	6.8	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.3	NA	20.0	ND	18.5	20.0	20.0	96.5	NA	85,0	119.0	92.5	100.0	60.0	140,0	7,8	20.0
1,4-dichlorobenzene	5.0	DN	ND	19.3	NA	20.0	ND	18.3	19.7	20.0	96.5	NA	82.0	122.0	91.5	98.5	18.0	190.0	7.4	20.0
n-butyl-benzene	5.0	ND	ND	20.2	NA	20.0	ND	20,0	21,1	20.0	101,0	NA	80.0	125.0	100.0	105.5	60,0	140.0	5.4	20.0
1,2-dichlorobenzene	5.0	ND	ND	19.6	NA	20.0	ND	18.6	20.0	20.0	98.0	NA	86.0	119.0	93.0	100.0	19.0	190.0	7.3	20.0
1.2-dibromo-3-chloropropana	5.0	ND	ND	17.0	NA	20,0	ND	15.6	17.3	20.0	85.0	NA	66,0	134.0	78.0	86.5	60.0	140,0	10.3	20,0
1,2,4-trichlorobenzene	6.0	ND	ND	18.5	NA	20.0	ND	17.6	18.4	20.0	92.5	NA	78.0	122.0	88.0	92.0	60.0	140.0	4.4	20.0
haxachlorobutadiene	5.0	ND	ND	18.4	NA	20.0	ND	17.8	18.0	20.0	92.0	NA	73.0	125.0	89.0	90.0	60.0	140.0	1.1	20.0
napthalene	10.0	ND	ND	19.1	NA	20.0	ND	17.7	19.8	20.0	95.5	NA	74.0	148.0	88.5	99.0	60.0	140.0	11.2	20.0
1,2,3-trichlorobenzene	5.0	ND	ND	18.6	NA	20.0	ND	17.6	18.5	20.0	93.0	NA	74.0	124.0	88.0	92.5	60.0	140.0	5.0	20.0

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL ≈ Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

ANAL WORK GRP: WG49665

METHOD: 8270 MATRIX: WATER BLK FLNM: 8743.D°

BENCH SHEET: V105P35

SMPL ID: NA SMPL FLNM: NA

INSTRUMENT: HPMS5

ANALYST: mdc

MS FLNM: NA

RUN DATE: 11/20/98 **EXT DATE: 11/18/98**

CONCENTRATION UNITS: UGAL LCS FLNM: 8744.D* PREP WORK GRP: WG49510

MSD FLNM: NA

BEYOND LIMITS PERCENT RECOVERY . % PERCENT CONCENTRATION , ug/L LCS MS SPIKE SP!KE LCS MSD RPD RPD > 8 S ANALYTE BLANK RDL LCS LCL ADDED LCS SAMPLE ADDED MS MSD BLANK LCS UÇL SAMPLE MS MSD MS LCL MS UCI RPD UCL LIMIT PYRIDINE 5.0 ND 100 100 5 150 NA 8.8 ND NA NA NA 6.8 NA NA 5 150 NA 40 N-NITROSODIMETHYLAMINE 5.0 150 150 ND 100 31.5 ND 100 NA NA NA 315 5 NA NA NA 5 NA 40 ANILINE 10.0 ND 100 24.8 ND 100 NA NA NA 24.8 5 150 NA NA NA 5 150 NA 40 PHENOL 5.0 ND 100 25.3 112 NA ÑA 112 ND 100 NA 25.3 NA NA 40 NA NA. 5 BIS(2-CHLOROETHYL)ETHER 5.0 ND 100 58.5 ND 100 58.8 12 158 NA NA 12 158 NA NA MA NA NA 40 2-CHLOROPHENOL 5.0 ND 100 60.4 ND 400 NA 23 134 NA NA NA 23 134 NA 40 NA NA 60.4 1.3-DICHLOROBENZENE 5.0 NΩ 100 5 172 NA 172 NA 49 2 ND 100 NA NA NA 49 2 NA NA 5 40 1,4-DICHLOROBENZENE 10.0 ND 124 100 51.5 ND 100 NA NA NA 51.5 20 NA NA. ΝÁ 20 124 NA. 40 5.0 BENZYL ALCOHOL ND 100 50.3 100 50.3 5 150 NA NA NA 5 150 NA 40 ND NA NA NA 1.2-DICHLOROSENZENE 5.0 32 129 ND 100 51.8 ND 100 NA NA NA 51.8 NA: NA NA 32 129 NA 40 2-METHYLPHENOL 5.0 ND 100 59.8 ND 100 59.8 150 NΑ 150 NA 40 NA NA NΔ NA 5 NΔ BISCZ-CHLOROISOPROPYLIETI-ND 100 166 5.0 36 NA. 38 166 61.6 ND 100 NA NA NA 61.6 Ñ٨ NA NA 40 3- & 4-METHYLPHENOL 5.0 ND 100 54.4 ND 100 NA NA NA 54,4 150 NA NA NA 150 NΔ 40 N-NITROSO-DI-N-PROPYLAMIN 50 ND 100 62.6 ND 100 NA NA 230 NA NA ΝA 5 230 NA. 40 NA 62.6 £ HEXACHLOROETHANE 5.0 ND 100 40 113 40 113 NA 49.7 ND 100 NA NA NA 49.7 NA NA NA 40 NITROBENZENE 5.0 ND 100 60.7 ND 35 180 NΑ 35 180 NA 40 100 NA. NA NA. 80.7 NΑ NA. ISOPHORONE 5.0 ND 100 21 196 NA 21 106 NΔ 710 NΠ 100 NΔ NA 71.0 MA NA 40 NΔ 5.0 2-NITROPHENOL NO 100 68.3 ND 100 NA NA NA 68.3 28 182 NA NA 29 182 NA 40 2.4-DIMETHYLPHENOL 5.0 ND 100 74.8 ND 100 NA NA NA 74.8 32 119 NA NA NA 32 119 NA 40 BIS/2-CHLOROETHOXY)METHA 25.0 33 ND 184 NA: NA 33 184 40 100 8.08 ND 100 NA NÁ NA 60.8 NA NA BENZOIC ACID 5.0 ND 100 NA 5 150 NA NA 5 150 NA 5.3 ND 100 NA NA 5.3 NA 40 39 135 39 135 2.4-DICHLOROPHENOL 5.0 ND 100 NA NA NA: 40 70.8 ND 100 NA NA NA 70.6 NA 1.2.4-TRICHLOROBENZENE 5.0 ND 100 54.5 ND 100 NA NA 54.5 44 142 NA NA NA 44 142 NΔ 40 21 21 133 50 ND 100 133 NA: NΑ NA NA. 40 NAPHTHALENE 63.8 ND 100 NA NA NA 63.6 4-CHLOROANILINE 5 150 NΔ NA NΑ 5 150 NA 40 5.0 ND 100 42.4 ND 100 NA NA NA 42.4 116 24 116 NA 40 HEXACHLOROBUTADIENE 10.0 ND 100 57.4 ND 100 NA NA NA: 57.4 24 NA NA NA: 4-CHLORO-3-METHYLPHENOL 5.0 87.7 22 147 NA NA NA 22 147 NA 40 ND 100 87.7 ND 100 NΔ МΔ NA 5 150 5 150 NA 40 2-METHYLNAPHTHALENE 5.0 ND 100 63.4 ND 100 NA NA NA 63.4 NA NA ÑΑ 5 150 NA 5 150 NA 40 **HEXACHLOROCYCLOPENTADI** 5.0 ND 100 44.7 ND 100 NA NA NA 44.7 NA 37 144 NA 37 144 NA 40 2,4,6-TRICHLOROPHENOL 25.0 ND 100 63.0 ND 100 NA NA NA 83.0 NA NA: 150 NΑ 150 NA 92.5 5 NA NA 5 40 2,4,5-TRICHLOROPHENOL 5.0 ND 100 92.5 ND 100 NA NA NA 60 118 NA NΑ NA 60 118 NA: 40 2-CHLORONAPHTHALENE 25.0 NØ 100 NA NA NA 65.9 65.9 NĎ 100

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158

150

145

191

132

150

139

NA

NA

NA

NA:

NA

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NOTES & DEFINITIONS: NA = NOT APPLICABLE ND = NOT DETECTED RDL=REPORTING DETECTION LIMIT

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2-NITROANILINE

3-NITROANILINE

ACENAPHTHENE

4-NITROPHENOL

DIBENZOFURAN

2,4-DINITROPHENOL

2,4-DINITROTOLUENE

DIMETHYLPHTHALATE

2.6-DINITROTOLUENE

ACENAPHTHYLENE

NS = NOT SPIKED L= below QC limit H=above QC limit

KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49665

EXT DATE: 11/18/98

RUN DATE: 11/20/98 SMPL ID : NA

INSTRUMENT: HPMS5 ANALYST: mdc

METHOD: 8270 MATRIX: WATER BENCH SHEET : V105P35 BLK FLNM: 8743,0"

SMPL FLNM: NA

CONCENTRATION UNITS: UG/L

MS FLNM : NA

MSD FLNM; NA

PREP WORK GRP: WG49510

LCS FLNM: 8744.0"

				CONCE	TRATION	, ug/L						PERCE	NT RECOV	ERY, 9	۲				PERCE	NT		BEY(-	
ANALYTE	ROL	BLANK	LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCSLCL	LCS UCL	SAMPLE	MS	MSD	MS LCL	MŞ UCL	MSD RPD	RPD UCL	BEYON D RPD LIMIT	SAMPLE	¥ 3	Š	MSD
DIETHYLPHTHALATE	5.0	ND	100	99.0	ND	100	NA	NA	NA	99.0	5	114	NA	NA	NA	5	114	NA	40	1			J	J
FLUORENE	5.0	ND	100	93.5	ND	100	NA.	NA	NA	93.5	25	158	NA	NA	NA.	25	158	NA.	40					
4-CHLOROPHENYL-PHENYL ET	5.0	ND	100	89.0	ND	100	NA	NA	NA	89.0	59	121	NA	NA	NA	59	121	NA.	40					
4-NITROANILINE	25.0	ND	100	109.3	ND	100	NA.	NA	NA	109.3	5	150	NA .	NA	NA.	5	150	NA	40				4	199
1,2-DIPHENYLHYDRAZINE *	5.0	ND	100	90.9	ND	100	NA	NA	NA	90.9	5	150	NA	NA	NA	5	150	NA	40					
4.6-DINITRO-2-METHYLPHENO	25,0	ND	100	87.1	ND	100	NA	NA.	NA .	87.1	5	181	NA .	NA	N/A	5	181	NA.	40				###	188
N-NITROSODIPHENYLAMINE **	5.0	ND	100	102.6	ND	100	NA	NA	NA	102.6	5	150	NA	NA	NA	. 5	150	NA.	40		المماد		2004	
4-BROMOPHENYL-PHENYL ET	5.0	ND	100	85.6	ND	100	NA	NA .	NA.	85.6	53	127	NA	NA	NA .	53	127	NA .	40			20	400	.[88]
HEXACHLOROBENZENE	5,0	ND	100	99,4	ND	100	NA	NA	NA	99.4	5	152	NA	NA	NA.	5	152	NA.	40		.		0043550	dioce:
PENTACHLOROPHENOL	25.0	NO	100	93,4	ND	100	NA :	NA.	NA .	93.4	14	176	NA	NA	NA.	14	176	NA	40			** 	7	188
PHENANTHRENE	5.0	ND	100	110.5	ND	100	NA	NA	NA.	110.5	54	120	NA.	NA	NA.	54	120	NA NA	40	1000000000		عامه		5685
ANTHRACENE	5.0	ND	100	109.3	ND	100	NA	NA	NA .	109.3	27	133	NA.	NA.	NA.	27	133	NA.	40			24		
CARBAZOLE	5.0	ND	100	118.0	МD	100	NA	NA	NA	118.0	5	150	NA	NA	NA.	5	150	NA	40	. Juannummanna		2020002	100410000	20000
DI-N-BUTYLPHTHALATE	5.0	ND	100	119,0	ND	100	NA.	NA	NA .	119.0		118	NA.	NA	NA .		118	NA	- 40				40	1887
FLUORANTHENE	5.0	ND	100	122.5	ND	100	NA	NA	NA .	122.5	26	137	NA NA	NA	NA	26	137	NA.	40			ender:	valees.	dese
PYRENE	5.0	NO	100	120.9	NO	100	NA	NA .	NA	120.9	62	115	NA.	NA	NA :	52	115	NA	40				4	1382
BUTYLBENZYLPHTHALATE	5.0	ND	100	124.9	ND	100	NA	NA	NA	124.9	5	152	NA	NA	NA.	5	152.	NA NA	40		0.000000	0000000	60 4 (808)	9492
BENZOJAJANTHIRACENE	10.0	ND	100	119,1	NO	100	NA.	NA	NA .	119.1	5	262	NA	M	NA	5	252	M	40			33 J	###	188
3,3'-DICHLOROBENZIDINE	5.0	ND	100	116.9	ND	100	NA	NA	NA	116.9	33	143	NA 	NA	NA	33	143	NA SOCYCE SOCK	40	4 DAM 9000000	0000000	2000 30		923
CHRYSENE	5.0	ND.	100	134.3	ND	100	NA	NA.	NA.	134,3	17	168	NA	NA	NA.	O.	168	NA.	40				#	
BIS(2-ETHYLHEXYL)PHTHALAT	5.0	ND	100	134.0	ND	100	NA	NA	NA	134.0	8	158	NA.	NA	NA.	8	158	NA	40		0000016		30040000	380
DHN-OCTYLPHTHALATE	5.0	ND	100	112.6	ND	100	NA.	NA.	NA.	112.6	4	146	NA.	NA.	NA.		148	NA:	40					100
BENZO(B)FLUORANTHENE	5.0	ND	100	111.3	ND	100	NA	NA	NA.	111.3	24	159	NA	NA	NA	24	159	NA Mariana	40 	Annarati	2000000	and a	200	daa
BENZOIKIFLUORANTHENE	5.0	NO.	100	113.8	ND	100	NA	NA	NA	113.8		162	NA	NA.	NA.	. 11	162	NA	40		1			
BENZO/AIPYRENE	5.0	ND	100	115.9	ND	100	NA	NA	NA .	115,9	17	163	NA.	NA	NA	17	163	NA NA	40		200000	2230000	800	
INDENO(1,2,3-CUIPYRENE	5.0	NO.	100	123,8	ND	100	NA.	NA.	NA.	123.8		171	NA.	N	NA.	5	171	NA.	40			88 9 8		1888
DIBENZIA.HIANTHRACENE	5.0	ND	100	132.5	ND	100	NA	NA	NA	132.5	5	227	NA.	NA.	NA	5	227	NA.	40			166660000	500	MSX.
BENZOJG.H.IJPERYLENE	5.0	ND	100	128.5	ND	100	NA	NA	NA.	128.5	5	219	NA.	NA	NA	5	219	NA.	40	l.				
SURROGATES									<u> </u>		ļ					- 24	100	├			╂┷┼	+	+	╄
2-FLUOROPHENOL		42.6	100	44,1	NA	100	NA	NA.	42.6	44.1	21	100	NA	NA SSSENIASS	NA	21	ou socialization					933 W	****	188
PHENOL - D5		25.2	100	28.1	NA.	100	. NA	NA.	25.2	28.1	10	94	NA .	NA NA	NA NA	10 35	94 114		(300)30004600	\$458646855555	**************************************	500 JA	.00400000	750
NITROBENZENE - D5	00000	32.0	50	33.9	NA	50	NA	NA	63.9	67.7	35	114 	NA NA	NA.		43	118							
2-FLUOROBIPHENYL		34.6	50	40.0	NA .	50	NA.	NA.	69.2	79.9	43	316	NA NA	SSSONASS NA	NA NA	10	123	200000000000000000000000000000000000000	404000000000000	000000000000000000000000000000000000000		~~	7~~	ľ
2,4,6-TRIBROMOPHENOL		109.0	100	122.8	NA	100	NA	NA	109.0	122.8	10	123	NÃ.	NA.	NA.	33			******		***	## W	*	
O-TERPHENYL - D14		52.7	50	51.8	NA	50	NA.	NA	105,4	103,6	33	141	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	v papal Walio	ARRIVA S	- 33	5.0000 3.0 000	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	400 C C C C C C C C C C C C C C C C C C		1000001		*******	1000

NOTES & DEFINITIONS:

NS = NOT SPIKED





KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS, FRONT

INSTRUMENT: HP9

SAMPLE ID : NA

EXT'N DATE: 11/19/98

ANALYST: ECL

BLK FLNM: 1464

SMPL FLNM: NA

EXT'N BENCH SHT: V105P44

RUN DATE: 11/24/98

LCS FLNM: 1465

MS FLNM : NA

EXT'N WORK GRP: WG49575 ANAL WORK GRP: WG49716

MSD FLNM : NA

		CONCENTRATION, up/L					% RECOVERY							PERCENT				
COMPOUND	RDL:	Blank	LCS	Sample	a MS	MSD	Blank	LCS	LCS LCL		Sample	мs	MSD	MS LCL		MS/MSD RPD	RPD Adivsory Limits	Blank LCS Sample MS
									M									
ALPHA-BHC BAMMA-BHC	0.05 ∶0.05	ND NO	0.286 0.389	I ND	NA ÚÁ	NA NA	NA NA	57.2 67.8	37	134	NA NA	******	******	51	145 134	NA NA	0-43 0-18	*
BETA-BHC HERTACHLOR	0.05 0.05	ND NO		i ND	NA NA	NA NA	NA NA	81.6 62.0		147] [1	NA NA	******	******	51 40	129 139	NA NA	0-28 0-37	
DELTA-BHC ALORIN	0.05 0.05	ND NE	0.289	I ND	NA NA	NA NA	NA NA	85.6 57.8	42		NA NA	******			138 143	NA NA	0-78 0-88	
HEPTACHLOR EPOXIDE	0.05 :0.05 0.05	ND ND ND		1: ND	NA NA NA	NA NA NA	NA NA	74.0 NA :	45	142 119 119	NA NA NA	###### AIA AIA	NA.	45	135 115 115	NA SNASS NA	0-40 0-40 0-17	
ALPHA-CHLORDANE ENDOSULFAN: (4,4-DOE	0.05	ND ND	NA 0.277 0.347		NA NA	NA NA NA	NA NA		45	[NA NA	******		37		NA NA	0-22 0-23	
DIELDAIN Endrin	0.10 0.10	NO NO	0.397 0.396		ŅĄ ŅĄ	ŅĀ ŅĀ	NA NA	79.4 79.2	36 30	146 147	NA NA	******	*******	56	171 154	NA NA	0-20 0-28	
aa-DDD Endosulfan (I	0.10 0.10 0.10	ND ND	0.386 0.299	l ND	NA.	NA	NA NA	77.2 59.8 73.8	81. D 25	202	NA NA NA	*******	###### ###### ########################	21	179 117 168	NA NA	0-30 0-18 0-22	
4.4-DDT ENDRIN ALDEHYDE ENEKISLA-FAN SULFATE	0.10 0.10	ND ND	0.388 0.259 0.265	I ND	NA NA	NA NA	NA NA	51.8 53.2		NA	NA NA	******	******	21	115 117	NA NA	0-40 0-30	
METHOXYCHLOR ÉNDRIM KETÓNÉ	0.50 D.1D	NO NO	0.379 0.324	I ND	NA NA	NA ŅĀ	NA ONA	75.8 64.8	NA NA	NA NA	NA NA	eessess eessess	*******	ŅĂ.	196 NA	NA NA	0-19	
Tech-CHLORDANE TOXAPHENE	1.00 :1.00	ND ND		(∵ND	NA NA	NA NA	NA NA	NA NA	45 41.	119 126	NA NA	NA NA	NA NA	45	115 (25	NA NA	0-40 19-40	
SURROGATES															一			
2.4.5.4 TETRACHLORO M-XYLENE DECACKLOROBIPHENYL		9.97 9.68	9.28 11.1	NA I NA	NA NA	ŅĀ NA	49 <u>2</u> 8 .48.4	48.4 55.4	13 25	154 140	NA NA	NA NA	NA NA	16 25	154 140			

NOTES & DEFINITIONS :

LCS, MS & MSD apiked at 0.5 ug/L

LCS#LABORATORY CONTROL SAMPLE

SURROGATES apilted at 20 ug/L

MS=MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

OF * ORTHOED OUT.

ND - NOT DETECTED

ROL-REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES

MARIETTA, OH

OUALITY CONTROL SUMMARY / 8081 WATERS , REAR

INSTRUMENT : HP9

SAMPLE ID: NA

EXT'N DATE: 11/19/98 EXT'N BENCH SHT: V105P44 ANALYST : ECL

BLK FLNM: 1464 LCS FLNM: 1465 SMPL FLNM : NA MS FLNM : NA

EXT'N BENCH SHT: V105P44 RUN DATE: 11/24/98
EXT'N WORK GRP: WG49575 ANAL WORK GRP: WG49716

MSD FLNM : NA

		CONCENTRATION, ug/L		% RECOVERY							F	ERCENT							
COMPOUND	RDL	Blank	LCS	,Sample	_	MSD	Blank	LCS	LCS LCL		Sample	MS	MSD	LCL	UCL	MS/MSD RPD	RPD Advisory Umists	Name CS CS	Sample MS
			(that shoulded							HIG.					······				HILL
ALPHA-BHC	0.05	NO	0.297		NA.	NA I	NA Distribution	59.4	I	134	NA	******	******		145	NA .	0-43	[]	or # Original
QAMAABHC	0.05	ŅÓ∷	0.340		ŅĄ	[NA	(MACCO	68.0	32		((NA))(*****	innanana.		134	, ŅĄ:;;;	O ie		
BETASHC	0.05	ND	0.386		NA	NA .	NA -0-0-000	77.2 	H	147	NA -(+);(c):	****	*****		129	NA	0-28 9-37	14463	*
COLOR HEPTACHILDRY	0.05	ND:	-, -, -, -, -, -, -	(∹ND	NA:	NA.	NA	60.4 86.6	100,000	1(C 140	≓ŅĀ∷ NA	######################################	******		(39 138	NA.	0-78	40.00	#
DELTA-BHC ALORIN	0.05	ND ND	0.433	I ND	NA NA	NA.	NÃ.	56:8	42		NA.	******	******	69500	143		0-78		
HEPTACHLOR EPOXIDE	0.05	ND	• • • • •	I ND	NA.	NA.	NA			142	NA	******	*********	1, , , ,	135	NA.	0-40		*******
GAMMA-CHLOREIANE	0.05	ND:		1 ND:	NA:	. NA	NA.	NA.	45		NA:	NA	: NA::	45:	· · ·	NA:	0-10	::::::	
ALPHA-CHLORDANE	0.05	ND	NA.	I ND	NA NA	NA.	NA.	NA.		119	NA	NA	NA.		115	NA	0-17		•,•,•,•
ENDOSULFAN 1	0.05	NO:	0.282	1.1.1.1.1.1.1	NA:	· NA	NA	58.4	4 · · · · ·	153	NA .	444444		37	123	NA :::	0.22	::::::	. 4-
4.4-DDE	0.10	ND		I ND	NA	NA.	NA.	76.6	1	145	NA	******	******	64	152	NA	0-23	1	#
DIELORIS	0.10	ND.	0.431	(ND	NA	NA.	NA .	86.2	36	146	NÁ	***	*****	23	ίŻ	NA	9:28		*
ENDAIN	0.10	ND	0.409	I ND	NA	NA.	NA .	81.8	30	147	NA	******	******	56	154	NA	0-28	<i>.</i>	
4,4-000	0.10	ND:	0.408	(ND	NA:	NA :	NA	81:2	31	141	NA.	*****	bodank	56	179	. NA	. :0-30 ∵		
ENDOSULFAN II	0.10	ND	0.310	I ND	NA	NA	NA .	62.0	D	202	NA	*****	******	21	117	NA	0-18		
44-001	:010	NO	0.397) ND	NÁ :	W	NA	79.4	25	160	NA:	*****	*******	42	168	. NA	0-22		;• 4 .:
ENORIN ALDEHYDE	0.10	ND	0.277	I ND	NA	NA.	NA	55.4	(NA	NΑ	ŅĄ	*****	******	21	115	NA	0-40		#
ENDOSULFAN SULFATE	p.ip	NO	0.293	ı. Nö	NA :	ŅĄ	NA 3	58.6	26	Ήŧ	N/A	*****	. Kambana	31	117	ŅA	0 30		#
METHOXYCHLOR	0.10	ND	0.405	I ND	NA .	NA	NA	81	ŅĄ.	NA.	, NA	******	******	26	196	NA	0-19		#
ENDRIN KETONE	0.50	ND	0.357	(∵ND	NA.	NA.	. NA	7,1,	NA :	ŅĶ	: NA:	*****	*****	NA:	iķ	NA.			
Tech-CHLORDANE	1.0	ND	ŅA	I ND	NA	NA.	NA .	, NA	45	119	NA.	ŅĄ	NA		115	NA.	0-40	11111111	414144
TOXAPHENE	1.0	Nb∵	NA:	t ND	NA :	NA:	NA :::	: NA	id:	126	: NA:	.∵ŅA∵:	∰ NA ∷	40.	125	i (NAI)	∵ iọ-40 ∵:		
SURROGATES																			
2,4,5,6 TETRACHLORO MAYLENE	41141	8.54	9.29	. NA	NA :	. NA	42.7	46.5	13	154	NA.	NA.	NA .	13	154				
DECACHLOROBIPHENYL	1.00.000	. 우 ? . · 10.1		I NA	NA	NA	50.5	62.8		140	NA NA	NA.	NA NA	25					

NOTES & DEFINITIONS:

LCS, MS & MSD apiked at 0.5 ugit. LCS=LABORATORY CONTROL SAMPLE

SURROGATES epiked at 20 ug/L MS=MA

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL = DILUTED OUT
ND = NOT DETECTED

RDL-REPORTING DETECTION LIMIT





KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , REAR

INSTRUMENT: HP10

SMPL ID: 11-339-01

EXT'N DATE: 11/19/98 EXT'N BENCH SHT: V105P45

ANALYST: CDB

BLK FLNM: 055R0101

SMPL FLNM: 059R0101

EXT'N WORK GRP: WG49576

RUN DATE: 11/20/98

LCS FLNM: 056R0101

MS FLNM: 060R0101 MSD FLNM: 061R0101

ANAL WORK GRP: WG49595 LCS Dup FLNM: NA MSD FLNM:

			CONCEN	TRATION,	ug/L				% REC	OVERY	****				F	PERCENT				- 9-	
COMPOUND	ROL	Blank	_LCS_	Sample	MS	MSD	Blank	LCS	FCF FC		MS	MSO		MS JCL	RPD	RPD Advisory Limits	Jank	છ	Sample	NS.	dSD dSD
AROCLOR 1016 AROCLOR 1221	0.5 0.5	ND NO	2.88 NA	ND ND	5,84	5.37	NA NA	115	48 12	activities de la con-	117	107	 4000000000000 	125	8.5	NA NA			(5 × 10 g)		
AROCLOR 1232 AROCLOR 1242	0.5 0.5	ND ND	NA NA	ND ND	NA NA NA	NA NA NA	NA NA	NA NA NA	NA N NA N NA N	NA.	NA NA NA	NA NA NA	NA	NA NA NA	NA NA NA	NA NA NA					
AROCLOR 1248 AROCLOR 1254	0.5 1.0	ND NO	NA NA	ND ND	NA NA	NA NA	NA NA	NA NA	NA N NA N	NA	NA NA	NA NA	NA	NA NA	NA NA	NA 0-40					
AROCLOR 1260 SURROGATES	1.0	ND	2.41	ND	4.85	4.62	NA .	96.6	59 12	≥ NA	97.1	92.4	59	22	4.9	NA .			© 26.		
2.4,5,6-TETRACHLORO-M-XYLENE		0.140	0.214	0.136	0,336	0.289	79.0	107	13 15	68.0	84,0	72.3	13	54							
DECACHLOROBIPHENYL		0.121	0.204	0.138	0.293	0.313	60.5	102	25 14		73.3	78.3		40		\$2000000000000000000000000000000000000	20000000	109000000	00000.00	00000001100	90000

NOTES & DEFINITIONS :

LCS, MS & MSD spiked at .25 ug/kg SURROGATES spiked at .0200 ug/kg

NA = NOT APPLICABLE

DL = DILUTED OUT
ND * NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS=MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

Page 1 of 1

Project Contact:	·					1:										Ī -			
Will y Burton Turn Around Requirements:									- {					1		{			
Turn Around Requirements:																			
Project No.: Project Name:				1					- {					1			}	1	1
4119-007 PPCOS Ad Sampler (print): Klingbiel	ricktai	<u> </u>		ies		1								-	}	}	}	} }	
Sampler (print):	Signature:	wá.		SAM	Š	\$ \$		ĺĺ											
ningulae	Zun	, K lim	gebre	NUMBER OF SAMPLES			ړا	14											ADDITIONAL REQUIREMENTS
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WEER HILL	1/14/98	930					├				+	1		+	+	╁	╁	┼─┤	
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Relinquished by: (Signature) Even-Klinge bill	11/16/19 140	0				}						1							
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Relinquished by: (Signature)	Date Tim	(Signature	for Laboratory by:	•		. 11	77]	j										
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Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
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KEMRON Environmental Services 109 S lite Park Marietta, Ohio 45750 Phone: (740) 373-4071

Versar, Inc. 9200 Rumsey Road

Columbia, MD 21045-1934

Attention: William Burton

Login #: L9811376 Report Date: 12/01/98

Work ID: 4119-007/PACOE PEDRICKTOWN

Date Received: 11/20/98

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9811376-01 L9811376-03 L9811376-05	WEIR 1119/GRAB MIX 1119 WIER 1118	L9811376-02 L9811376-04	WEIR 1119/COMP WIER 1117

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOM ELAP ID: 10861

Dennis S. Tepe



KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-01 Dil. Type: N/A COC Info: N/A Sample Weight: N/A Client Sample ID: WEIR 1119/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN Extract Volume: N/A

Matrix: Water Date Collected: 11/19/98 % Solid: N/A

Method: 8270C\3510C Run ID: R56672 Instrument: HPMS5

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 14:53 Analyst: MDC Lab File ID: 8771 Batch : WG49720

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	10	2	
95-57-8	2-Chlorophenol	ug/L	ND	10	2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND .	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2	
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Naphthalene	ug/L	. ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	10	2	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	Ν̈́D	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88-74-4	2-Nitroaniline	ug/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ИD	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	uq/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ДЙ	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	ND	10	2	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2	

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-01 Client Sample ID: WEIR 1119/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/19/98

% Solid: N/A

TCLP Extract Date: N/A Extract Date: 11/23/98

Analysis Date: 11/23/98 Time: 14:53

Instrument: HPMS5

Method: 8270C\3510C Run ID: R56672 Batch : WG49720

Analyst: MDC Lab File ID: 8771

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	ug/L	ND	10	2
100-01-6	4-Nicroanilina		ND	50	2
534-52-1	4,6-Dinitro-2-methylphenol	1107 / T.	ND	5ŏ	ž ·
86-30-6	N-MICLOSOGIDHENVIAMINE	11cg / L	ND	ĩŏ	2
101-55-3	4-Bromophenvi-phenvlether	ug/L	ND	10	2
118-74-1	Hexachlorobenzene	ug/L	ND	ĩŏ	2
87-86-5	Pentachiorophenol	ug/L	ND	5ŏ	2
85-01-8	Phenanthrene	ug/L	ND	10	2
120-12-7	Anthracene	ug/L	ND	10	2
86~74-8	Carbazole,	ug/L	ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L	· ND	10	2
206-44-0	Fluoranthene	ug/L	ND	10	2
129-00-0	Durana		ND	10	$\bar{2}$
85-68-7	Butylbenzylphthalate	ug/L	ND	īŏ	2
91-94-1	3,3'-Dichlorobenzidine	ug/L	ND	20	2
56-55 - 3	benzo (a) anchracene	ug/L	ND	īŏ	$\bar{2}$
218-01-9	Chrysene	ug/L	ND	īŏ	$\bar{2}$
117-81-7	DIS(2-Ethylhexyl)phthalate	ug/L	ND	10	$\bar{2}$
117-84-0	D1-n-octVibnthalate	ug/L	ND	10	$\bar{2}$
205-99-2	Benzo(b) Iluoranthene	ug/L	ND	10	2
207-08-9	Benzo(K) Iluoranthene	ug/L	ND	10	2
50-32-8	Benzo(a)pyrene	ug/L	ND	10	2
193-39-5	Indeno(1,2,3-cd) byrene	ug/L	ND	10	2
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ND	10	2
191-24-2	Benzo (g, h, i) Perylene	ug/L	ND	10	2
SITER	OGATES- In Percent Recovery:				
Dom	2-Fluorophenol	43.5	(21 - 100%)		
	Phenol-d5	27.1	1 TT WITE		
	Nitrobenzene-d5				
	2-Fluorohiphenyl	62.4 77.5	(35 - 114%) (43 - 116%)		
	2-Fluorobiphenyl		(10 - 123%)		
	n-Ternheny]_d14	117	`,		
	p-Terphenyl-d14	95.7	(33 - 141%)		

Login #L9811376 December 1, 1998 10:00 am

Product: 826-TCL - TCL Volatiles

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Lab Sample ID: L9811376-01 Client Sample ID: WEIR 1119/GRAB Site/Work ID: 4119-007/PACOE PEDRICKTOWN Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

% Solid: N/A Matrix: Water Date Collected: 11/19/98

TCLP Extract Date: N/A Method: 8260B Instrument: HPMS9 Extract Date: N/A Run ID: R56816

Analyst: SLT Lab File ID: 9VR00431 Analysis Date: 11/25/98 Time: 15:23 Batch: WG49821

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
74-87-3	Chloromethane	ug/L		ND	10	1	
74-83-9	Bromomethane	uq/L		ND	10	1	
75-01-4	Vinyl chloride	ug/L		ND	10	1	
75-00-3	Chloroethane	ug/L		ND	10	ī	
75-09-2	Methylene chloride	ug/L		ND	5.0	1	
67-64-1	Acetone	ug/L	11		10	ī	
75-15-0	Carbon disulfide	ug/L		ND	5.0	$ar{\mathbf{i}}$	
75-35-4	1,1-Dichloroethene	ug/L		ND	5.0	ī	
75-34-3	1,1-Dichloroethane	ug/L		ND	5.0	ī	
540-59-0	1,2-Dichloroethene (Total)	ug/L		ND	5.0	ī	
67-66-3	Chloroform	ug/L		ND	5.0	ī	
107-06-2	1,2-Dichloroethane	ug/L		ND	5.0	ī	
78-93-3	2-Butanone	ug/L		ND	10	$ar{ extbf{1}}$	
71-55-6	1,1,1-Trichloroethane	ug/L		ND	5.0	ī	
56-23-5	Carbon tetrachloride	ug/L		ND	5.0	ī	
75-27-4	Bromodichloromethane	ug/L		ND	5.0	ī	
78-87-5	1,2-Dichloropropane	ug/L		ND	5.0	ī	
10061-01-5	cis-1,3-Dichloropropene	ug/L		ND	5.0	1	
79-01-6	Trichloroethene	ug/L		ND	5.0	1	
124-48-1	Dibromochloromethane	ug/L		ND	5.0	1	
79-00-5	1,1,2-Trichloroethane	ug/L		ND	5.0	1	
71-43-2	Benzene	ug/L		ND	5.0	1	
10061-02-6	trans-1,3-Dichloropropene	ug/L		ND	5.0	1	•
75-25-2	Bromoform	ug/L		ND	5.0	1	
108-10-1	4-Methyl-2-pentanone	ug/L		ND	10	1	
591-78-6	2-Hexanone	ug/L		ND	10	1	
127-18-4	Tetrachloroethene	ug/L		ND	5.0	1	
79-34-5	1,1,2,2-Tetrachloroethane	ug/L		ND	5.0	1	
108-88-3	Toluene	ug/L		ND	5.0	1	
108-90-7	Chlorobenzene	ug/L		ND	5.0	1	
100-41-4	Ethyl benzene	ug/L		ND	5.0	1	
100-42-5	Styrene	ug/L		ND	5.0	1	
1330-20-7	Xylenes, Total	ug/L		ND	5.0	1 .	
1330-20-7	Aylenes, local	ug/ D					
SURR	OGATES- In Percent Recovery:						
J-1	Dibromofluoromethane	105		86 - 118%)			
	Toluene-d8	106	•	88 - 110%)			
	p-Bromofluorobenzene	106	(86 - 115%)			
	1,2-Dichloroethane-d4	98.1	(80 - 120%)			

RL = Reporting Limit

Page 4 of 12

100000

Lab Sample ID: L9811376-02 Client Sample ID: WEIR 1119/COMP Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/19/98 1100

COC Info: N/A

Analyte Total Currended Calin	Unit		Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	(mg/L) 11		5.0	1	N/A	DLN	11/23/98	09:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811376-02

Client Sample ID: WEIR 1119/COMP Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Dil. Type: N/A COC Info: N/A

Date Collected: 11/19/98

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 16:38

Instrument: HP10

Analyst: CDB Lab File ID: 054R0101 Method: 8082/3550

Run ID: R56839 Batch: WG49690

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L		ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	42 38	- T - T	13 - 154%) 25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811376-02 Client Sample ID: WEIR 1119/COMP Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/19/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HP9 Method: 8081A\3510C

Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/24/98 Time: Analyst: ECL Lab File ID: 1472 Run ID: R56840 Batch : WG49717

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
319-84-6	alpha-BHC	ug/L	X773	0.05	-	
319-85 - 7	peta-BHC		ND	0.05	- -	
319-86-8	delta-BHC	ug/L ug/L	ХD	0.05	÷	
76-44-8	Heptachlor	ug/L	žĎ	0.05	‡	
309-00-2	Aldrin	ug/b	ND	0.05	± -	
1024-57-3	Heptachlor epoxide	ug/L	йĎ	0.05	÷	
959-98-8	Endosulfan I	ug/L	ND	0.05	÷	
60-57-1	Dieldrin	ug/L	ND	0.05	÷	
72-55-9	4,4'-DDE	ug/L	ND	0.10	1	
72-20-8	Endrin	ug/L	ND	0.10	_	
33213-65-9	Endosulfan II	ug/L	йD	0.10	<u>+</u>	
72-54-8	4,4'-DDD.	ug/L	ND	0.10		
1031-07-8	Endosulfan sulfate	ug/L	MD	0.10	÷	
50-29-3	4,4'-DDT	ug/L	MD	0.10	<u> </u>	
72-43-5	Methoxychlor	ug/L	MD	0.10	<u>+</u>	
53494-70-5	Endrin ketone.	ug/L	ЙD	0.50	<u> </u>	
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	<u>.</u>	
5103-71-9	alpha Chlordane	ug/L	ND	0.10	<u> </u>	
5103-74-2	gamma Chlordane	ug/L	ND	0.05	Ť	
8001-35-2	Toxaphene	ug/L	ND	0.05	<u> </u>	
	gamma-BHC (Lindane)	ug/L	ND	1.0	<u> </u>	
	gamma but (billidate)	ug/L	ND	0.05		
SURR	OGATES- In Percent Recovery:					
5015	2,4,5,6-Tetrachloro-m-xylene	62 6	/ 33 15/4			
	Decachlorobiphenyl	62.6	(13 - 154%)			
	secretatoropatricitat	61.0	(25 - 140%)			

Login #L98 December 1, 1998 10:00 am KEMRON ENVIR RNTAL SERVICES

Lab Sample ID: L9811376-03 Client Sample ID: MIX 1119 Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

Collected: 11/19/98 1200

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time 1	Method
Total Suspended Solids	mg/L	19		5.0	1	N/A	DLN	11/23/98	09:00	160.2

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9811376-03

Client Sample ID: MIX 1119

Site/Work ID: 4119-007/PACOE PEDRICKTOWN

Matrix: Water

COC Info: N/A Date Collected: 11/19/98

Dil. Type: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Method: 8082/3550

TCLP Extract Date: N/A

Extract Date: 11/23/98

Analysis Date: 11/23/98 Time: 17:14

Instrument: HP10 Analyst: CDB Lab File ID: 055R0101

Run ID: R56839 Batch : WG49690

CAS # Compound Units Result Oualifiers RL Dilution 12674-11-2 Aroclor-1016..... ug/L 0.50 1 11104-28-2 Aroclor-1221..... ug/L ND 0.50 11141-16-5 Aroclor-1232.....ug/L ND 0.50 1 53469-21-9 Aroclor-1242..... ug/L ND 0.50 1 12672-29-6 Aroclor-1248..... ug/L ND 0.50 1 11097-69-1 Aroclor-1254..... ug/L ND 1.0 11096-82-5 Aroclor-1260..... ug/L 1 ND 1.0 SURROGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene..... (13 - 154%) (25 - 140%) Decachlorobiphenyl.... 77.5

KEMRON ENVIRONMENTAL SERVICES

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9811376-03 Client Sample ID: MIX 1119 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water Date Collected: 11/19/98 % Solid: N/A

Instrument: HP9 Method: 8081A\3510C

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/24/98 Time: Analyst: ECL Lab File ID: 1473 Run ID: R56840 Batch : WG49717

CAS #	Compound	Units .	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1
319-85-7	beta-BHC	ug/L	ND	0.05	± -
319-86-8	delta-BHC	ug/L	ND	0.05	+
76-44-8	Heptachlor	ug/L	ND	0.05	± -
309-00-2	Aldrin.	ug/11 ·	ND ND		±
1024-57-3	Heptachlor epoxide	ug/L		0.05	<u> </u>
959-98-8	Endosulfan I	ug/L	ND ND	0.05	<u></u>
60-57-1	Dieldrin	ug/L		0.05	
72-55-9	4,4'-DDE	ug/L	ND	0.10	<u>.</u>
72-20-8	Endrin	ug/L	ND	0.10	<u> </u>
33213-65-9	Endosulfan II	ug/L	ND	0.10	<u> </u>
72-54-8	4 41-DDD	ug/L	ND	0.10	<u> </u>
1031-07-8	4,4'-DDD Endosulfan sulfate	ug/L	ND	0.10	1
50-29-3	A AL-DDW	ug/L	ND	0.10]
72-43-5	4,4'-DDT	ug/L	ND	0.10	1
53494-70-5	Methoxychlor	ug/L	ND	0.50	1
	Endrin ketone	ug/L	ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	1
5103-71-9	alpha Chlordane	ug/L	ND	0.05	1
5103-74-2	gamma Chlordane	ug/L	ND	0.05	1
8001-35-2	Toxaphene	ug/L	ND	1.0	1
	gamma-BHC (Lindane)	ug/L	ND	0.05	1
SURR	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	53.7	(13 - 154%)		
	Decachlorobiphenyl	75.0	(25 - 140%)		

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9811376-03 Client Sample ID: MIX 1119 Site/Work ID: 4119-007/PACOE PEDRICKTOWN Matrix: Water

TCLP Extract Date: N/A
Extract Date: 11/23/98
Analysis Date: 11/23/98 Time: 15:34

Date Collected: 11/19/98

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Instrument: HPMS5

Method: 8270C\3510C

Analyst: MDC Lab File ID: 8772 Run ID: R56672 Batch : WG49720

CAS # Compound
108-95-2 Phenol
111-44-4 Bis(2-Chloroethyl)ether
1,3-Dickhorobenzene
106-46-7
95-50-1 1,2-Dichlorobenzene. ug/L
95-48-7 2-Methylphenol Ug/L ND 11 2.22 108-60-1 bis(2-Chloroisopropyl) ether Ug/L ND 11 2.22 106-44-5 4-Methylphenol Ug/L ND 11 2.22 621-64-7 N-Nitroso-di-n-propylamine Ug/L ND 11 2.22 67-72-1 Hexachloroethane Ug/L ND 11 2.22 98-95-3 Nitrobenzene Ug/L ND 11 2.22 98-95-3 Nitrobenzene Ug/L ND 11 2.22 98-95-1 Isophorone Ug/L ND 11 2.22 88-75-5 2-Nitrophenol Ug/L ND 11 2.22 105-67-9 2,4-Dimethylphenol Ug/L ND 11 2.22 111-91-1 Bis(2-Chloroethoxy) Methane Ug/L ND 11 2.22 120-83-2 2,4-Dichlorophenol Ug/L ND 11 2.22 120-83-1 1,2,4-Trichlorobenzene Ug/L ND 11 2.22 191-20-3 Naphthalene Ug/L ND 11 2.22 106-47-8 4-Chloroaniline Ug/L ND 11 2.22 106-47-8 4-Chloroaniline Ug/L ND 11 2.22 107-87-88-3 Hexachlorobutadiene Ug/L ND 11 2.22 191-57-6 2-Methylnaphthalene Ug/L ND 11 2.22 191-57-6 2-Methylnaphthalene Ug/L ND 11 2.22 191-57-6 2-Methylnaphthalene Ug/L ND 11 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 15 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene Ug/L ND 56 2.22 191-58-7 2-Chloroaphthalene
108-60-1 bis(2-Chloroisopropyl)ether
106-44-5
621-64-7 N-Nitroso-di-n-propylamine ug/L ND 11 2.22 67-72-1 Hexachloroethane ug/L ND 11 2.22 98-95-3 Nitrobenzene ug/L ND 11 2.22 78-59-1 Isophorone ug/L ND 11 2.22 88-75-5 2-Nitrophenol ug/L ND 11 2.22 105-67-9 2,4-Dimethylphenol ug/L ND 11 2.22 111-91-1 Bis(2-Chloroethoxy)Methane ug/L ND 11 2.22 120-83-2 2,4-Dichlorophenol ug/L ND 11 2.22 120-83-1 1,2,4-Trichlorobenzene ug/L ND 11 2.22 120-82-1 1,2,4-Trichlorobenzene ug/L ND 11 2.22 91-20-3 Naphthalene ug/L ND 11 2.22 91-20-3 Naphthalene ug/L ND 11 2.22 106-47-8 4-Chloroaniline ug/L ND 11 2.22 87-68-3 Hexachlorobutadiene ug/L ND 11 2.22 17-4-4 Hexachlorobutadiene ug/L ND 11 2.22 17-47-4 Hexachlorocyclopentadiene ug/L ND 11 2.22 91-57-6 2-Methylnaphthalene ug/L ND 11 2.22 91-57-6 2-Methylnaphthalene ug/L ND 11 2.22 91-58-7 2-4,5-Trichlorophenol ug/L ND 11 2.22 91-58-7 2-Chlororophenol ug/L ND 11 2.22
Telephorone
Telephorone
Telephorone
R8-75-5 2-Nitrophenol. ug/L ND 11 2.22
105-67-9 2.4-Dimethylphenol ug/L ND 11 2.22 111-91-1
111-91-1 Bis (2-Chloroethoxy) Methane
120-83-2 2,4-Dichlorophenol ug/L ug/L ND 11 2.22 120-82-1 1,2,4-Trichlorobenzene ug/L ND 11 2.22 11 2.22 106-47-8 4-Chloroaniline ug/L ND 11 2.22 106-47-8 4-Chloroaniline ug/L ND 11 2.22 11 2.22 12 12
91-20-3 Naphthalene ug/L 106-47-8 4-Chloroaniline ug/L 87-68-3 Hexachlorobutadiene ug/L 59-50-7 4-Chloro-3-methylphenol ug/L 91-57-6 2-Methylnaphthalene ug/L 77-47-4 Hexachlorocyclopentadiene ug/L 88-06-2 2,4,6-Trichlorophenol ug/L 95-95-4 2,4,5-Trichlorophenol ug/L 91-58-7 2-Chloronaphthalene ug/L
91-20-3 Naphthalene ug/L 106-47-8 4-Chloroaniline ug/L 87-68-3 Hexachlorobutadiene ug/L 59-50-7 4-Chloro-3-methylphenol ug/L 91-57-6 2-Methylnaphthalene ug/L 77-47-4 Hexachlorocyclopentadiene ug/L 88-06-2 2,4,6-Trichlorophenol ug/L 95-95-4 2,4,5-Trichlorophenol ug/L 91-58-7 2-Chloronaphthalene ug/L
106-47-8
106-47-8 4-Chloroaniline 87-68-3 Hexachlorobutadiene 59-50-7 4-Chloro-3-methylphenol 91-57-6 2-Methylnaphthalene 11 2.22 17-47-4 Hexachlorocyclopentadiene 88-06-2 2,4,6-Trichlorophenol 95-95-4 2,4,5-Trichlorophenol 95-95-8-7 2-Chloronaphthalene 91-58-7 2-Chloronaphthalene 95-95-8-7 2-Chloronaphthalene 95-95-95-95-95-95-95-95-95-95-95-95-95-9
Sp-50-7
91-57-6 2-Methylnaphthalene ug/L ND 11 2.22 77-47-4 Hexachlorocyclopentadiene ug/L ND 11 2.22 88-06-2 2,4,6-Trichlorophenol ug/L ND 11 2.22 95-95-4 2,4,5-Trichlorophenol ug/L ND 11 2.22 91-58-7 2-Chloropaphthalene ug/L ND 56 2.22
77-47-4 Hexachlorocyclopentadiene
88-06-2 2,4,5-Trichlorophenol
95-95-4 2,4,5-Trichlorophenoi
91-58-7 2-7-11CHIOTOPHENOI
91-58-7 2-Chloropaphthalana 1974 ND 56 2.22
00"/3"4 2"NICIOANIIINA 2.22
131-11-3 Dimernalato
4V0-30-0 ACERADITAVI ANA
23*V2*2
03-32-3 ACPRADRINATIO
31-40-3
100-02-7 4-Nitrophenol
141-14-4 2.4-D1D1FTOTOINED
94-66-3 Bioth-3al-base 11 2 22
7005-72-3 4-Chlorophenyl-phenyl ather 11 2.22
7005-72-3 4-Chiorophenyl-phenyl ether ug/L ND 11 2.22

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

BAD - - Becky A. Diehl CEB - - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens CRC - - Carla R. Cochran DIH - - Deanna I. Hesson DKM - - Dewey K. Miller DLN - - Deanna L. Norton DLP - - Dorothy L. Payne ECL - - Eric C. Lawson FEH - - Fay E. Harmon HV - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH - - Ji Y. Hu KHA - - Kim H. Archer KAS - - Kevin A. Stutler KRA - - Kathy R. Albertson

MDA - - Mike D. Albertson

ALC - - Ann L. Clark

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - - Michael L. Schimmel MMB - - Maren M. Beerv RDC - Rebecca D. Cutlip RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - - Robert E. Kyer RSS - - Regina S. Simmons RWC - Rodney W. Campbell SJK - - Sindy J. Kinney SJM - - Shawn J. Marshall SLP - - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TJW - Thomas J. Ware TRS - . Todd R. Stack VC - - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	fier Description	Qualifier	Description
(A) (B) (C) + < > B C	See the report narrative See the report narrative See the report narrative Correlation coefficient for the MSA is less than 0.995 Less than Greater than Present in the method blank Confirmed by GC/MS Surrogate or spike compound out of range	N NA ND NF NFL NI NR NS P	Tentatively Identified Compound (TIC) Not applicable Not detected at or above the reporting limit (RL) Not found No free liquid Non-ignitable Analyte is not required to be analyzed Not spiked Concentration > 25% difference between the two GC
CG D DL E F FL I J L	Confluent growth The analyte was quantified at a secondary dilution factor Surrogate or spike was diluted out Estimated concentration due to sample matrix interference Present below nominal reporting limit (AFCEE only) Free liquid Semiquantitative result, out of instrument calibration range Present below nominal reporting limit Sample reporting limits elevated due to matrix interference Duplicate injection precision not met	QNS R RA RE S SMI SP	columns Quantity not sufficient to perform analysis Analyte exceeds regulatory limit Reanalysis confirms reported results Reanalysis confirms sample matrix interference Analyzed by method of standard addition Sample matrix interference on surrogate Reported results are for spike compounds only Too numerous to count Analyzed for but not detected Post-digestion spike for furnace AA out of control limits Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

INORGANIC QA/QC



KEMKON ENVIRONMENTAL SERVICES OHIO EY LABORATORY QUALITY CONTROL SUMMARY

MATRIX:

WORKGROUP: METHOD:

wg49759

160.2

Water.

RUN DATE: 11/23/98

ANALYST:

DUPLICATE: 11-365-03

UNITS:

mg/L

													ENT RECO	VERY		PERCENT	T RPD
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS	MS	MS LCL	MS UCL	REP	RPD UCL
TSS	5.00	ND	50.00	47.00	106.00	109,00	NR	NR	NR	94.0	81.0	114.5	NR	NR	NR	2.70	

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

DL = DILUTED OUT

NA # NOT APPLICABLE

ND = NOT DETECTED NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T- LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT * CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT

UCL = UPPER CONTROL LIMIT

REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



Workgroup #: WG49821

Method: 8260A Run Date: 11/25/98

LCS2 FLNM: NA LCS DF:

Matrix: Water Instrument ID: HPMS_9

SMPL Num: 11-331-05

SMPL DF:

Units: ug/L

BLK FLNM: 98K00425 BLK2 FLNM: NA

SMPL FLNM: 9AM00428 MS FLNM: 9AM00429 MS DF:

LCS FLNM: 9QC00426

MSD FLNM: 9AM00430

MSD DF:

						CONCENTRA	TION, PPB				<u> </u>		· · · · · ·	PERC	ENT REC	OVERY	_		PERCE	NT RPD
	'					LCS Spike				MS Spike			LCS	LCS			MS	MS	MS	RPO
· <u> </u>	RDL	BLK	BLK2	LCS	LCS2	Lavel	SMPL	Ms	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
dichlorodifluoromethane	10.0	ND	ND	20.3	NA	20.0	ND	18.2	19,7	20.0	101.5	NA	38.0	148.0	91.0	98,5	60.0	140,0	7.9	20,0
chloromethane	10.0	ND	ND	19.4	NA	20.0	ND	18.1	19.0	20.0	97.0	NA	56.0	132.0	90.5	95.0	D	273.0	4.9	20.0
vinyl chloride	10.0	ND	ND.	23.0	NA	20.0	ND :	21.3	22,1	20.0	115.0	NA.	68,0	1.25.0	106.5	110.5	D	251.0	3.7	20,0
bromomethane	10.0	ND	ND	24.1	NA	20.0	ND	22.9	22.1	20.0	120.5	NA	55.0	138.0	114.5	110.5	00000000000000000000000000000000000000	242.0	3.8	20.0
chloroethane	10.0	ND	ND	21.4	NA	20.0	ND	20.5	19.4	20.0	107.0	NA	57.0	128,0	102.5	97.0	14.0	230,0	5.5	20,0
trichlorofluoromethane	10.0	ND	ND	20.2	NA	20.0	ND	20,8	20.7	20.0	101.0	NA	70.0	127.0	104.0	103.5	17.0	181.0	0.5	20.0
freon 113	NTC	ND	ND	NA :	NA .	20.0	ON.	NA	NA C	20.0	NA .	NA	NA	NA	NA	NA	70.0	130.0	NA	20,0
acetone	100.0	ND	ND	18.7	NA	20.0	ND	18.2	18.8	20.0	93.5	NA	44.0	114.0	91.0	94.0	70.0	130.0	3.2	20.0
1,1-dichloroetherie	5.0	ND	ND	20.5	NA	20.0	ND	20.3	20.5	20.0	102.5	NA	69.0	144.0	101.5	102.5	O	234.0	1.0	20.0
iodomethane	NTC	ND	ND	25.0	NA	20.0	ND	12,4	26.0	20.0	125.0	NA	NA	NA	62.0	130.0	70.0	130.0	70,8	20.0
methylana chlorida	5.0	ND	ND	22.5	NA	20.0	ND	22.4	21,6	20.0	112.5	NA	71.0	128.0	112.0	108.0	D	221.0	3,6	20.0
carbon disulfide	5.0	ND	ND	19.5	NA	20.0	ND	19,7	19.7	20.0	97.5	NA	67.0	136.0	98.5	98.5	70.0	130.0	0.0	20.0
acrylonitrile	NTC	ND	ND.	.NA	NA	20.0	ND	NA .	NA.	20.0	NA	NA .	NA.	NÁ .	NA	NA	70.0	130.0	NA .	20.0
rans-1,2-dichloroethene	5.0	ND	ND	21.3	NA	20.0	ND	21,6	21.8	20,0	106.5	NA	85.0	133.0	108.0	109.0	54.0	156.0	0.9	20.0
vinyl acetate	10.0	ND	ND	27.1	NA	20.0	ND	27.0	27,5	20.0	135.5	NA	9.0	236.0	135.0	137.5	9.0	238,0	1.8	20.0
1,1-dichloroethane	5.0	ND	ND	19.8	NA	20.0	ND	19.9	20.6	20.0	99.0	NA	82.0	124.0	99.5	103.0	59.0	165.0	3.5	20.0
2-butanone	100,0	ND.	ND	20.3	NA	20.0	ON	18.3	18,8	20,0	101.5	NA	43.0	140.0	91.5	94.0	70.0	130,0	2,7	20.0
2,2-dichloropropana	5.0	ND	ND	21.0	NA	20.0	ND	21.4	21.5	20.0	105.0	NA	77.0	126.0	107.0	107.5	60.0	140.0	0.5	20.0
cis-1,2-dichloroethene	5,0	ND	ND	19.9	NA	20.0	ND	19,5	20.4	20.0	99.5	NA .	69.0	130.0	97.5	102.0	60.0	140,0	4,5	20,0
chloroform	5.0	ND	ND	19.5	NA	20.0	ND	19.8	20.3	20.0	97.5	NA	83.0	121.0	99.0	101.5	51.0	138.0	2.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL= Lower Control Limit

UCL= Upper Control Limit

RPD = Relative Percent Difference

Workgroup #: WG49821

Run Date: 11/25/98

LCS2 FLNM: NA LCS DF:

Method: 8260A Matrix: Water

Instrument ID: HPMS_9

SMPL Num: 11-331-05

SMPL DF:

Units: ug/L

BLK FLNM: 9BK00425 BLK2 FLNM: NA

SMPL FLNM: 9AM00428 MS FLNM: 9AM00429

MS DF: MSD DF:

LCS FLNM: 9QC00426

MSD FLNM: 9AM00430

		Γ		<u></u>		ONCENTRA	TION, PPB		<u></u>		1			PERCI	NT REC	OVERY			PERCE	NT RPD
						LCS Spike	1	•		MS Spike	1		LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Lovel	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
bromochloromethane	5.0	ND	ND	20.7	NA	20.0	ND	20.4	20.7	20.0	103.5	NA	85.0	118.0	102.0	103.5	60.0	140.0	1.5	20,0
1,1,1-trichloroethane	5.0	ND	ND	19.5	NA	20.0	ND	19,8	19,9	20,0	97,5	NA	74.0	125,0	99.0	99.5	52.0	162.0	0.5	20,0
1,1-dichloropropens	5.0	ND	ND	21.7	NA	20,0	ND	21.7	21.8	20.0	108.5	NA	85.0	126.0	108.5	109.0	60.0	140.0	0.5	20.0
carbon tetrachloride	5,0	ND	ND	20.7	NA	20.0	ND	20,7	20,7	20.0	103,5	NA	73.0	129.0	103.5	103,5	70,0	140.0	0.0	20.0
1,2-dichloroethane	5,0	ND	ND	19.8	NA	20.0	ND	19.9	20.2	20.0	99.5	NA	76.0	123.0	99.5	101.0	49.0	155.0	1.5	20.0
benzene	5,0	ND	ND	20.6	NA	20.0	ND	20.4	20.1	20,0	103,0	NA	86.0	118,0	102.0	100.5	37.0	151.0	1,5	20.0
trichloroethens	5.0	ND	ND	20.1	NA	20.0	ND	20.2	20.0	20.0	100.5	NA	82.0	120.0	101.0	100.0	71.0	157.0	1.0	20.0
1,2-dichioropropane	5,0	NO	ND	20.4	NA	20.0	ND	20,1	19,9	20.0	102.0	NA	74.0	126.0	100.5	99.5	್ರಾರ	210.0	1.0	20.0
bromodichloromethane	5.0	ND	ND	20.5	NA	20,0	ND	20.4	20.5	20.0	102.5	NA	74.0	126.0	102.0	102.5	35.0	155.0	0.5	20.0
dibromomethane	5.0	ND	ND	20.4	NA	20.0	ND	20,4	20.5	20.0	102.0	NA	78.0	125,0	102.0	102,5	60,0	140.0	0.5	20.0
2-chloroethylvinyl-ether	10.0	ND	ИD	18.1	NA	20.0	ND	МÐ	ND	20.0	90.5	NA	50.0	151.0	NA	NA	70.0	130.0	NA	20.0
4-methyl-2-pentanone	10,0	ND	ND	21.0	NA	20.0	ND	18,2	17,9	20,0	105,0	NA	79.0	127.0	91.0	89,5	70.0	130,0	1.7	20.0
cis-1,3-dichloropropene	5.0	ND	ND	21.6	NA	20.0	, ND	21.7	21.3	20.0	108.0	· NA	77.0	123.0	108.5	106.5	D	227.0	1.9	20.0
toluene	5,0	ND	ФИ	20.4	NA	20.0	ND	20,0	20.4	20,0	102.0	NA	83.0	119.0	100.0	102.0	47.0	150.0	2.0	20.0
trans-1,3-dichloropropene	5.0	ND	ND	19.9	NA	20.0	ND	19.3	19.7	20.0	99.5	NA	74.0	124.0	96.5	98.5	17.0	183.0	2.1	20,0
1,1,2-trichloroathane	5.0	ND	ND	19.8	NA	20.0	NØ	18,6	19.5	20,0	99,0	NA	72.0	119.0	93.0	97.5	52.0	150.0	4.7	20.0
2-hexanone	10.0	ND	ND	19.7	NA	20.0	ND	18.5	18,5	20.0	98.5	NA	55.0	114.0	92.5	92.5	70.0	130.0	0.0	20.0
1,3-dichloropropane	5.0	ND	NĐ	19.4	NA	20.0	ND	18.7	19.7	20.0	97.0	NA	73.0	122.0	93.5	98,5	60.0	140,0	5,2	20,0
tetrachloroethene	5.0	ND	ND	20.0	NA	20.0	ND	18.8	20.2	20.0	100.0	NA	82.0	120.0	94.0	101.0	64.0	148.0	7.2	20,0
dibromochiommethans	5.0	ND	NĐ	20.3	NA.	20.0	ND	19.8	20.3	20.0	101.5	NA.	72.0	121.0	99.0	101.5	53.0	149.0	2.5	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

8260

N ENVIRONMENTAL SERVICES - OVL **VOLATILE QUALITY CONTROL SUMMARY**



Workgroup #: WG49821

Run Date: 11/25/98

LCS2 FLNM: NA LCS DF:

Method:

Units:

8260A

Instrument ID: HPMS 9

SMPL Num: 11-331-05

SMPL DF:

Matrix: Water

ug/L

BLK FLNM: 9BK00425 BLK2 FLNM: NA

SMPL FLNM: 9AM00428

MS DF:

MS FLNM: 9AM00429

MSD DF:

LCS FLNM: 90C00426

MSD FLNM: 9AM00430

					(CONCENTRA	TION, PPB	•						PERC	ENT REC	OVERY			PERCE	NT RPD
				-		LCS Spike	 -			MS Spike			LCS	LCS			MS	MS	MS	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
1,2-dibromoethane	5.0	ND	ND	20.0	NA	20.0	ND	19.3	19.4	20.0	100.0	NA	75.0	121.0	96.5	97.0	60.0	140.0	0.5	20.0
chlorobenzene	5,0	ND	ND	20.2	NA	20.0	ND	19.9	20.0	20.0	101.0	NA.	83.0	120.0	99.5	100,0	37.0	160.0	0.5	20.0
1,1,1,2-tetrachloroethane	5.0	ND	ND	19.5	NA	20.0	ND	19,1	19.8	20.0	97.5	NA	79.0	118.0	95.5	99.0	60.0	140.0	3.6	20.0
ethylbenzene	5.0	ND	ND	20.0	NA	20,0	.ND	19.6	19,8	20.0	100.0	NA:	82.0	119.0	.98,0	99.0	37.0	162.0	1,0	20,0
m + p-xylene	5.0	ND	ND	41.9	NA	40.0	ND	40.0	39.8	40.0	104.8	NA	81,0	121.0	100.0	99.5	60,0	140.0	0.5	20.0
o-xylene	5.0	ND	ND	21-8	NA	20.0	ND	20.8	20.8	20,0	109.0	NA:	81.0	199.0	104.0	104.0	60,0	140.0	0.0	20.0
styrene	5.0	ND	ND	22.3	NA	20.0	ND	21.2	21.1	20.0	111.5	NA	81.0	118.0	106.0	105.5	60,0	140.0	0.5	20.0
bromotom	5.0	ND	ND	20.8	NA	20.0	ND	18.8	19.7	20.0	104.0	NA	68,0	129.0	94.0	98.5	45.0	169,0	4.7	20,0
isopropylbenzene	5.0	ND	ND	21.6	NA	20.0	ND	20.6	20.5	20.0	108.0	NA	81.0	121.0	103.0	102.5	60.0	140.0	0.5	20.0
1,1,2,2-tetrachioroethane	5.0	ND	ND	21.4	NA	20:0	ND	20.2	20.9	20.0	107.0	NA	61.0	137,0	101.0	104.5	46,0	157.0	3.4	20.0
1,2,3-trichloropropane	5,0	ND	ND	20.2	NA	20.0	ND	19.0	20.0	20.0	101.0	NA	72.0	130.0	95.0	100.0	60.0	140.0	5.1	20.0
ans-1,4-dichloro-2-butene	NTC	ND	ND	NA	NA	20,0	ND	NA '	NA	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	20,0
propyl-benzene	5.0	ND	ND	20.8	NA	20.0	ND	19.7	20,4	20.0	104.0	NA	69.0	135.0	98.5	102.0	60.0	140.0	3.5	20.0
bromobenzene	5.0	ND	ND	20.1	NA:	20.0	ND	19.8	20.0	20,0	100.5	NA	86.0	118,0	99.0	100.0	60,0	140.0	1.0	20.0
1,3,5-trimethylbenzene	5.0	ND	ND	20.7	NA	20.0	ND	19.9	20.6	20.0	103.5	NA	83.0	121.0	99.5	103.0	60.0	140.0	3.5	20.0
2-chloratoluene	5.0	ND	ND.	20.8	NA	20.0	ND	19.1	21,0	20.0	104.0	NA	0.08	126.0	95.5	105.0	60.0	140.0	9.5	20,0
4-chiorotoluene	5.0	ND	ND	20.7	NA	20.0	ND	20.9	19.6	20.0	103.5	NA	80.0	125.0	104.5	98.0	60,0	140,0	6.4	20.0
tert-butyl-benzene	5.0	ND	ND.	20.5	NA	20.0	ND	19.6	20.0	20,0	102.5	NA .	79.0	114,0	98.0	100.0	60.0	140.0	2.0	20.0
1,2,4-trimethylbenzene	5,0	ND	ND	20.6	NA	20.0	ND	19.9	20.3	20.0	103.0	NA	84.0	121.0	99.5	101.5	60.0	140.0	2.0	20.0
sec-butyl-benzene	5.0	ND	ND	20.0	NA	20.0	ND	18.9	19.5	20.0	100.0	NA	81.0	122.0	94.5	97.5	60.0	140.0	3.1	20.0

Notes and Definitions:

RDL = Reporting Detection Limit

ND = Not Detected

BLK = Method Blank

NA = Not Applicable

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

8260

KEMRON ENVIRONMENTAL SERVICES - OVL VOLATILE QUALITY CONTROL SUMMARY

Workgroup #: WG49821

Run Date: 11/25/98

LCS2 FLNM:

LCS DF:

Method: 8260A Instrument ID: HPMS_9

SMPL Num: 11-331-05

SMPL DF:

Matrix: Water **BLK FLNM: 9BK00425**

SMPL FLNM: 9AM00428

MS DF:

1

Units:

BLK2 FLNM: NA MS FLNM: 9AM00429

MSD DF;

ug/L

LCS FLNM: 9QC00426

MSD FLNM: 9AM00430

						ONCENTRA	TION, PPB							PERCE	NT REC	OVERY			PERCEN	IT RPD
						LCS Spike		-		MS Spike			LÇS	LCS			MS	MS	мѕ	RPD
	RDL	BLK	BLK2	LCS	LCS2	Level	SMPL	MS	MSD	Level	LCS	LCS2	LCL	UCL	MS	MSD	LCL	UCL	RPD	UCL
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	%	%	%	%	%	%	%	%	%	%
p-isopropyl-toluene	5.0	ND	ND	20.0	NA	20.0	ND	19.1	19,6	20.0	100.0	NA	80.0	119.0	95.5	98.0	60.0	140.0	2.6	20.0
1,3-dichlorobenzene	5.0	ND	ND	19.9	NA	20,0	ND	19.1	19.8	20,0	99,5	NA .	85.0	119.0	95,5	99,0	60.0	140,0	3,6	20,0
1,4-dichlorobenzene	5.0	ND	ND	19.6	NA	20,0	ND	19,0	19.2	20.0	98.0	NA	82.0	122.0	95.0	96.0	18.0	190.0	1.0	20.0
n-butyl-benzene	5.0	ND	ND	19.9	NA	20.0	ND	18,7	19,2	20.0	99.5	NA	0.08	125.0	93.5	96.0	60.0	140.0	2.6	20.0
1,2-dichlorobenzene	5.0	ND	ND	20.5	NA	20.0	ND	19.8	20.4	20.0	102.5	NA	86.0	119.0	99.0	102.0	19.0	190.0	3.0	20.0
, 2-dibromo-3-chloropropane	5.0	ND	ND	19.1	NA.	20.0	ND	17.7	17,8	20.0	95.5	NA	66.0	134.0	88,5	89.0	60.0	140,0	0,6	20,0
1,2,4-trichlorobenzene	5.0	ND	ND	19.2	NA	20.0	ND	18.1	18,4	20.0	96.0	NA	78.0	122.0	90.5	92.0	60.0	140.0	1.6	20.0
hexachiorobutadiene	5.0	ND	ND	17.1	NA	20.0	ND	15.4	16.5	20,0	85,5	NA	73.0	125,0	77.0	82.5	60.0	140.0	6.9	20.0
Napthalone	10.0	ND	ND	19.1	NA	20.0	ND	17.4	17.9	20.0	95.5	NA	74.0	148,0	87.0	89.5	60.0	140.0	2.8	20.0
1.2.3-trichlorobenzene	5.0	ND	ND	18.9	NA	20.0	ND	17.5	18.1	20.0	94.5	NA	74.0	124.0	87.5	90.5	60.0	140.0	3,4	20.0

BLK2 = Second Method Blank

LCS = Laboratory Control Sample

LCS2 = Second Laboratory Control Sample

SMPL = Sample Results

MS/MSD = Matrix Spike / Matrix Spike Duplicate

LCL = Lower Control Limit

UCL = Upper Control Limit

RPD = Relative Percent Difference

ND = Not Detected

NA = Not Applicable

RDL = Reporting Detection Limit

BLK = Method Blank

ANAL WORK GRP: WG49720

PREP WORK GRP: WG49659

CONCENTRATION UNITS: UG/L

METHOD: 8270 MATRIX: WATER

EXT DATE: 11/23/98 BENCH SHEET: V105P50

BLK FLNM: 8789.0" LCS FLNM: 8770.0"

RUN DATE: 11/23/98 SMPL ID : L9811381-01

SMPL FLNM: 8774.0° MS FLNM: 8775.0" MSD FLNM: 8776.0" INSTRUMENT: HPMS5 ANALYST: mdc

132

150

138

97.6

55.1

77.3

95.7

191

132

150

1 39

NA

47.2

67.7

85.9

5

5

39

15

13

40

40

40

		-		CONCE	NTRATION	, ug/L			ļ .			PERCE	IT RECOVE	RY , %					PERCE	NT		LIM	ond Its
ANALYTE	ROL	BLANK	LCS SPIKE ADDED	LC3	SAMPLE	MS SPIKE ADDED	мs	MSD	BLANK	LCS	rester	LCS UCL	SAMPLE	MS	MSD	MS LCL I	MS UCL	MSD RPD	RPD UCL	RPD >	SAMPLE	S SCANK	SH
/RIDINE	5.0	ND	100	21.5	ND	200	56.0	54.2	NA.	21.5	5	150	NA	28.0	27.1	5	150	3	40	1	П	T.	7
NITROSODIMETHYLAMINE	5.0	ND	100	30.8	ND	200	63.2	16.4	NA.	30.6	.	150	NA	31.6	28.2		150	. 11	40	1			4
ILINE	10.0	ND	100	39.9	ND	200	80.9	76.2	NA	39.9	5	150	NA	40.5	38.1	5	150	6	40	7			T
IENOL	5.0	ND	100	25.1	ND.	200	53.5	44.5	NA.	25.1	5.000	112	NA	26.7	22.3		112	(8)	40			***	d:
S(2-CHLOROETHYL)ETHER	5.0	ND	100	53.3	ND	200	96.2	93.5	NA	53.3	12	158	NA	48,1	46.7	1:2	158	3	40		F		
CHLOROPHENOL	5.0	ND	100	60.5	ND	200	100.5	(15.4	NA ⊗	50.5	23	134	NA	50.3	42.7	21	134	16	40				
-DICHLOROBENZENE	5.0	ND	100	44.3	ND	200	89,0	78.8	NA	44.3	5	172	NA	44.5	39.4	5	172	12	40	T	1		
-DICHLOROBENZENE	10.0	ND	100	46,8	ND	200	93.9	112.8	NA.	46.6	20	124	NA	47.0	41.4	21	124	13	40				
NZYL ALCOHOL	5.0	ND	100	46.4	ND	200	89,4	78.7	NA	46.4	5	150	NA.	44.7	39,4	5	150	13	40]			1
DICHLOROBENZENE	5.0	NO	100	46.5	ND	260	93.5	01.9	NA .	46.5	32	129	NA	46.7	41.0	3.2	129	13	40				1
IETHYLPHENOL	5.0	ND	100	54.1	ND	200	103.0	86.5	NA NA	54.1	5	150	NA	51,5	43.2	5	150	17	40		I I		
(2-CHLOROISOPROPY) JETH	5.0	ND.	100	51.1	ND	200	103.1	16.4	NA.	513	38	186	NA.	51.5	43.2	30	168	18	40			₩ ₩	
4-METHYLPHENOL	5.0	ND	100	50.6	ND	200	98.2	81,8	NA	50.6	5	150	NA	49.1	40.9	5	150	18	40				1
ITROSO-DI-N-PROPYLAMIN	5.0	ND	100	56.3	ND	200	108.9	8.143	NA	56.3	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	230	NA	54.5	45,9	1	230	17	40				
ACHLOROETHANE	5.0	ND	100	45.5	ND	200	85.8	75,2	NA	45.5	40	113	NA	42.9	37.6	40	113	13	40		"		1
ROBENZENE	5.0	ND	100	50.1	ND	200	102.9	183	WNA.	50.9	35	180	NA	51.A	44.2	25	180	015	40	 			
PHORONE	5.0	ND	100	64.1	ND	200	120.9	103.4	NA	64.1	21	196	NA NA	60,4	51.7	21	196	16	40	1			1
ITROPHENOL	5.0	ND	100	57.1	ND	200	114.0	(16,9	NA	57.9	29	182	NA	57.0	48,4	21	182	16	40				
DIMETHYLPHENOL	5.0	ND	100	68.5	ND	200	117.2	98.9	NA	68.5	32	119	NA	58.6	49.4	32	119	17	40				<u> </u>
2-CHLOROETHOXYMETHA	25.0	ND	100	53.1	ND	200	103.0	689	NA	53.1	33	384	NA	51.5	43.4	31000	184	17	40				
ZOIC ACID	5.0	ND	100	7.2	ND	200	43.9	49,3	NA	7.2	5	150	NA	21,9	24.7	5	150	12	40	1	F	1	
OICHLOROPHENOL	5.0	ND	100	64.3	ND	200	121.1	102.2	NA	64.9	39	135	NA.	60.5	51.1	30	135	17	40				
4-TRICHLOROBENZENE	5.0	ND	100	50.0	ND	200	99.2	84.7	NA	50.0	44	142	NA	49.6	42.3	44	142	16	40			******	1
HTHALENE	3.0	ND	100	56.3	ND	200	1123	96.8	NA.	56.6	21	133	NA.	56.1	48.4	21	133	15	40				
HLOROANILINE	5.0	ND	100	62.2	ND	200	97.8	104.7	NA	62.2	5	150	NA.	48.9	52.4	5	150	7	40	1			T
ACHEOROBUTADIENE	10.0	ND	100	54.1	NO	200	109.1	613.B	NA.	54.8	24	116	NA.	54.5	46.9	24	116	15	40			₩ ₩	1
HLORO-3-METHYLPHENOL	5.0	ND	100	77.0	ND	200	165.1	145.8	NA	77.9	22	147	NA	82.5	72.9	2 ?	147	12	40				~[~
ETHYLNAPHTHALENE	5.0	ND.	100	∞59.I⊗	MD	200	112.4		NA.	59.7	5	150	NA.	56.2	48.6	5	150	SS 14	40	l		*	4
(ACHLOROCYCLOPENTADI	********	ND	100	9.7	ND	200	17.5	14.8	NA	9.7	5	150	NA	8.8	7.4	5	150	17	40		•		Π.
S-TRICHLOROPHENOL	5.0 25.0	ND	100	75.U	ND	200	153.9	132.0	NA.	75.0	37	34	NA	76.9	66.0	37	144	15	40				
ристипальный расправления в принципальный в принципальный в принципальный в принципальный в принципальный в пр	2000000000	ND	100	82.7	ND	200	176.2	154.3	NA	82.7	5	150	NA	88.1	77.1	5	150	13	40			***	7
-TRICHLOROPHENOL	5.0		100	63.I	ND	200	× 117.1		NA.	60.1	60	118	NA.	58.5	49.9	60	118	16	40			**	
LORONAPHTHALENE	25.0	NO	************	4000000000000	ND	200	176.0	157.5	NA	80.8	5	150	NA	88.0	78.8	5	150	11	40	1	[~~]	*****	1
TROANILINE	5.0	ND	100	80.0	attanear attender	200	175.6	156.8	NA	79.6	.	112	NA	87.8	78.4	5	112	11	40	k			
THYLPHTHALATE	5.0	ND	100	78.1	ND	(000,000,000,000,000	146.5	125.5	NA	74.1	33	145	NA	73.3	62.8	33	145	15	40	- constatos:	F [™] Ť	ensor proces	T
NAPHTHYLENE	5.0	ND	100 ***********	74.1	ND ************************************	200	184.4	125.5	NA.	74.5	50	158	NA.	82.2	73.6		158	11	40	lessesses		* *	. 18
DINITROTOLUENE	5.0	ND	100	74.5	ND	200		aasaasa birasaalan		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5	150	NA	71.8	65.8	5	150	9	40	**************************************	**************************************		7
TROANILINE	25.0	ND	100	81.3	ND	200	143.5	131.5	NA	81.3	47	and the second	NA S	75.8	65.8	, i	145	314	40	l::::::::::::	333		J\$
NAPHTHENE	5.0	ND	100	74 1	ND	200	151.6	131.6 179.7	NA NA	74.1 65.8		145	NA NA	97.6	89.9	5	191	((((((((((((((((((((((((((((((((((((((40	100000000000000000000000000000000000000	5000 P:	0000 00 0 0	1000

NOTES & DEFINITIONS: NA - NOT APPLICABLE ND = NOT DETECTED RDL=REPORTING DETECTION LIMIT

ND

ND

ND

ND

25.0

25.0

5.0

100

100

100

100

2.4-DINITROPHENOL

4-NITROPHENOL

2,4-DINITROTOLUENE

DIBENZOFURAN

NS = NOT SPIKED L= below QC limit H=sbove QC limit

ND

NO

ND

ND

65.0

42.9

74.9

85.3

200

200

200

200

195.2

110.2

154.5

191,3

179.7

94,3

135.4

171.7

NA

NA

NA

NA.

65.8

42.6

74.9

86.9

39

ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

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Project Contact: CONTUR Requirements:	k	Λ_																				,		,		
Project No.: Project Nam 419-65+ PCO Sampler (print):	ne:	Pec	drick	<u>' to</u>	NV.			PLES		B																
Project No.: Project Nam 419-657 Project Nam Sampler (print): Hingubi el			گُ	,,, ,,,	Herie	نطبع	س	NUMBER OF SAMPLES		4/RB	8	00	3											<u> </u>		ADDITIONAL REQUIREMENTS
Sample i.D. No.	Сощр	Grab	Date		Time		tocol SW846		Hold	3	3	<u> </u>	-						<u></u>							REQUIREMENTS
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WEIR 1119	<u> </u>		1/19/	98	1100			2					1													
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Relinquished by: (Signature) Even Klem Relinquished by:	Cye	الم	Date 1)/19/98	Tim 152	Received by (Signature)	yy:		I	<u> </u>	Re (S	linqu ignati	ished ure)	l by:	<u> </u>					D	ate	Tir	ne	Red (Sig	eive	d by: re)	
Relinquished by: (Signature)	-0		Date	Tim	Received from (Signature)	or Labora	atory by:	· ^ ·	0(1)	۰۰۰۰۰	11/2		Ti	ime	Re	mark	(s:)) 5			ما	ec			A.C.	10 m o (10)
					MA	<u>WIL</u>	<u>UU</u>	ĽΨ	<u>U''</u>	<u>X</u> _		<u>/Ъ</u>	<u> 110</u>	<u> </u>			₩	2	u	" U	uc	X,		יוטני	<u> </u>	Semple.
Homogenize all composite <u>, sam</u> ples pric	r to an	alysis					W	hite – Ľ	ab 1	diox		Pin	k – Fle	eid			•	•				- 1				

C	Work Order		1370 Client_	Versa.	/#of S	amples_5	Due Date_	10/4	Page/_	
Sample #	Analyses	Reason	Removed By ADT	Removed From	MovedTo	Reliq. By	Ret'd by ADT	Ret'd To	Rec'd By	Reason
1,3	8260	anal	Cons Works	V-1	VOA	EXG	SH 12/1/18/21435	0.41	Blg	Olchin
	8270	5.7	111 111318 19080	WAYIR	SIAN		inwil/1/186000	Sum pota	153	
3-4	T55,	Anal	DLN 11/23/110190	Wolltie	_ULit	\U_{2}	DLN11133/18	Archive.		Anch
2,3	gerir/ fr.b	SXT	Pil 11/23/98808W	WILKIN	81.13	JJ3	Sinw ulayor even	Dumpoth	103	Archive
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						<u> </u>	<u> </u>	•		

KEMRON Environ ntal Services 109 Starte to Park Marietta, Onio 45750 Phone: (740) 373-4071

Versar, Inc.

9200 Rumsey Road

Columbia, MD 21045-1934

Login #: L9812010 Report Date: 12/09/98 Work ID: PEDRICKTOWN Date Received: 12/01/98

Attention: William Burton

PO Number:

Account Number: VERSAR-MD-331

SAMPLE IDENTIFICATION

Sample	Sample	Sample	Sample
Number	Description	Number	Description
L9812010-01	WEIR 1124	L9812010-02	BG1116
L9812010-03	BG1119	L9812010-04	EB112598
L9812010-05	WEIR112498	L9812010-06	WEIR1123
L9812010-07	WEIR1122	L9812010-08	WEIR1121
L9812010-09	WEIR1120	L9812010-10	WEIR1119

All results on solids/sludges are reported on a dry weight basis, where applicable, unless otherwise specified. This report shall not be reproduced, except in full, without the written approval of KEMRON.

NYSDOH ELAP ID: 10861

Certified By

Dennis S. Tepe



Order #98-12-010 December 9, 1998 13:54

KEMRON ENVIRONMENTAL SERVICES REPORT NARRATIVE

Samples BG1116 and BG1119 were received after the seven day holding time for extraction had expired.

Several of the samples submitted for TSS analysis were received after the seven day holding time had expired.

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-01 Dil. Type: N/A Client Sample ID: WEIR 1124 COC Info: N/A Site/Work ID: PEDRICKTOWN

Matrix: Water Date Collec

Date Collected: 11/24/98 % Solid: N/A

Sample Weight: N/A

Extract Volume: N/A

Cas #	Compound	Units	Result Qualifiers	RL	Dilution
11097-69-1	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	53.5 50.5	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-01 Dil. Type: N/A Sample Weight: N/A Client Sample ID: WEIR 1124 COC Info: N/A Extract Volume: N/A Site/Work ID: PEDRICKTOWN

Matrix: Water Date Collected: 11/24/98 % Solid: N/A

TCLP Extract Date: N/A Instrument: HP9 Method: 8081A\3510C Extract Date: 12/01/98 Analyst: ECL Run ID: R57178

Extract Date: 12/01/98 Analyst: ECL Run ID: R57178
Analysis Date: 12/05/98 Time: Lab File ID: 1524 Batch: WG50057

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1.
319-85-7	beta-BHC	ug/L	ND	0.05	1
319-86-8	delta-BHC	ug/L	ND	0.05	1
76-44-8	Heptachlor	ug/L	ND	0.05	1
309-00-2	Aldrin	ug/L	ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	1
959-98-8	Endosulfan I	ug/L	ND	0.05	1

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TCLP Extract Date: N/A

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-01 Client Sample ID: WEIR 1124 Site/Work ID: PEDRICKTOWN Matrix: Water

Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A

Extract Volume: N/A

Date Collected: 11/24/98

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C Run ID: R57178

Analyst: ECL Lab File ID: 1524

Batch: WG50057

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CAS #	Compound	Units	Result Qualifie	s RL	Dilution
60-57-1	Dieldrin	ug/L	ND	0.10	1
72-55-9	4,4'-DDE	ug/L	ND	0.10	1
72-20-8	Endrin	ug/L	ND	0.10	1
33213-65-9	Endosulfan II	uq/L	ND	0.10	1
72-54-8	4,4'-DDD	uq/L	ND	0.10	1
1031-07-8	Endosulfan sulfate	ug/L	ND	0.10	1
50-29-3	4,4'-DDT	ug/L	ND	0.10	1
72-43-5	Methoxychlor	ug/L	ND	0.50	1
53494-70-5	Endrin ketone	ug/L	ND	0.10	1
7421-93-4	Endrin aldehyde	ug/L	ND	0.10	1
5103-71-9	alpha Chlordane	ug/L	ND	0.05	1
5103-74-2	gamma Chlordane	ug/L	ND	0.05	1
8001-35-2	Toxaphene		ND	1.0	1
	gamma-BHC (Lindane)		ND	0.05	1
SURF	OGATES- In Percent Recovery:				
	2,4,5,6-Tetrachloro-m-xylene	47.1	(13 - 154%	1	
	Decachlorobiphenyl	56.0	(25 - 140%		

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-01 Client Sample ID: WEIR 1124 Site/Work ID: PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/24/98 Matrix: Water % Solid: N/A

Instrument: HPMS7 Method: 8270C\3510C

TCLP Extract Date: N/A Extract Date: 12/02/98 Analysis Date: 12/04/98 Time: 17:12 Analyst: MLS Lab File ID: 6491 Run ID: R57120 Batch : WG49979

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	10	2	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10	$\bar{2}$	
95-57-8	2-Chiorophenol	ug/L	ND	ĩŏ	$\tilde{\mathbf{z}}$	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	īŏ	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	$\bar{2}$	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	$\bar{2}$	
95-48-7	2-Methylphenol	ug/L	ND	īò	$\bar{2}$	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	$\bar{2}$	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND	10	$\bar{2}$	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2	
111-91-1	Bis (2-Chloroethoxy) Methane	uğ/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Naphthalene	ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	īč	$\bar{2}$	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88-74-4	2-Nitroaniline	uğ/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ND	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ND	50	2	
132-64-9	Dibenzofuran	ug/L	ND	10	2	
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2	
84-66-2	Diethylphthalate	ug/L	ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2	
		- 3,				

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Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9812010-01 Client Sample ID: WEIR 1124

Site/Work ID: PEDRICKTOWN * Solid: N/A Matrix: Water Date Collected: 11/24/98

Method: 8270C\3510C Instrument: HPMS7

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 17:12 Run ID: R57120 Analyst: MLS Batch : WG49979 Lab File ID: 6491

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution
86-73-7 100-01-6 534-52-1 86-30-6 101-55-3 118-74-1 87-86-5 85-01-8 120-12-7 86-74-8 84-74-2 206-44-0 129-00-0 85-68-7 91-94-1 56-55-3 218-01-9 117-84-0 205-99-2 207-08-9 50-32-8	Fluorene. 4-Nitroaniline. 4,6-Dinitro-2-methylphenol. N-Nitrosodiphenylamine. 4-Bromophenyl-phenylether. Hexachlorobenzene. Pentachlorophenol. Phenanthrene. Anthracene. Carbazole. Di-N-Butylphthalate. Fluoranthene. Pyrene. Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a) anthracene. Chrysene. bis(2-Ethylhexyl)phthalate. Di-n-octylphthalate. Benzo(b) fluoranthene. Benzo(k) fluoranthene. Benzo(a) pyrene.	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	Kesult	ND ND ND ND ND ND ND ND ND ND ND ND ND N	10 50 50 10 10 10 10 10 10 10 10 10 10 10 10	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
193-39-5 53-70-3 191-24-2	Indeno(1,2,3-cd) pyrene	ug/L ug/L ug/L		ND ND	10	2 2
SURR	OGATES- In Percent Recovery: 2-Fluorophenol Phenol-d5 Nitrobenzene-d5 2-Fluorobiphenyl 2,4,6-Tribromophenol p-Terphenyl-d14	43.7 29.3 63.2 69.5 112 108	(21 - 100%) 10 - 94%) 35 - 114%) 43 - 116%) 10 - 123%) 33 - 141%)		

海上文化 化二种流生 化二氯甲酚 经海绵工作 人名

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-01 Client Sample ID: WEIR 1124 Site/Work ID: PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water

Date Collected: 11/24/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: N/A Analysis Date: 12/03/98 Time: 13:11 Instrument: HPMS8 Method: 8260B Analyst: JLH Lab File ID: 8-5571 Run ID: R57170 Batch: WG49967

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L	ND	10	1
74-83-9	Bromomethane	ug/L	ND	ĩŏ	Ť
75-01-4	Vinyi Chloride	ug/L	ND	10	î
75-00-3	Chloroethane	ug/L	ND	10	î
75-09-2	Methylene chloride	ug/L	ND	5.0	ີ້
67-64-1	Acetone	ug/L	11	10	†
75-15-0	Carbon disulfide	ug/L	ND.	5.0	ī
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	ĩ
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	ັ້າ
540-59-0	1,2-Dichloroethene (Total)	ug/L	0.32 J	5.0	. î .
67-66-3	Chloroform	ug/L	ND	5.0	ī ·
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	วั
78-93-3	2-Butanone	ug/L	ND	10	์ วั
71-55-6	1,1,1-Trichloroethane	ug/L	ND	5.0	ĩ
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	วั
75-27-4	Bromodichloromethane	ug/L	ND	5.0	ĩ
78-87-5	1,2-Dichloropropane	ug/L	ND	5.0	ĩ
10061-01-5	Cls-1,3-Dichloropropene	ug/L	ND	5.0	ī
79-01-6	Trichloroethene	ug/L	ND	5.0	ī
124-48-1	Dibromochloromethane	ug/L	ND	5.0	ī
79-00-5	1,1,2-Trichloroethane	ug/L	ND	5.0	. 1
71 <i>-</i> 43-2	Benzene	ug/L	ND	5.0	ì
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	1
75-25-2	Bromolorm	ug/L	ND	5.0	ī
108 - 10-1	4-Methyl-2-pentanone	ug/L	ND ·	10	ī
591 <i>-</i> 78-6	2-Hexanone	ug/L	ND	10	1
127-18-4	Tetrachloroethene	ug/L	ND	5.0	1
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ЙD	5.0	1
108 - 88-3	Toluene	ug/L	ND	5.0	1
108-90-7	Chlorobenzene	ug/L	ND	5.0	1
100-41-4	Ethyl benzene	ug/L	ND	5.0	1
100-42-5	Styrene	ug/L	ND	5.0	1
1330-20-7	Xylenes, Total	uğ/L	ND	5.0	1
SURR	OGATES- In Percent Recovery:				
	Dibromofluoromethane	108	(86 - 118%)		
	Toluene-d8	94.7	(88 - 110%)		
	p-Bromofluorobenzene	93.9	(86 - 115%)		
	1,2-Dichloroethane-d4	108	. (80 - 120%)	•	

KEMRON ENVIRONMENTAL SERVICES

Product: 808-PCB-W - PCB's (Water)

Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9812010-02 Client Sample ID: BG1116

Site/Work ID: PEDRICKTOWN Matrix: Water Date Collected: 11/16/98 % Solid: N/A

TCLP Extract Date: N/A Method: 8082/3550 Instrument: HP10 Extract Date: 12/01/98 Run ID: R57159 Analyst: CDB

Analysis Date: 12/02/98 Time: 17:23 Lab File ID: 009F0101 Batch : WG49924

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221. Aroclor-1232. Aroclor-1242. Aroclor-1248. Aroclor-1254. Aroclor-1260.	uq/L	ND ND ND ND ND ND ND	0.50 0.50 0.50 0.50 0.50 1.0	1 1 1 1 1 1 1
SURF	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	59.5 77.5	(13 - 154%) (25 - 140%)		

Product: 8081P - Organochlorine Pesticides

Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9812010-02 Client Sample ID: BG1116

Site/Work ID: PEDRICKTOWN % Solid: N/A Date Collected: 11/16/98

Matrix: Water

Method: 8081A\3510C TCLP Extract Date: N/A Instrument: HP9 Run ID: R57178 Extract Date: 12/01/98 Analyst: ECL

Lab File ID: 1525 Batch: WG50057 Analysis Date: 12/05/98 Time:

CAS #	Compound	Units	Result Qualifiers	RL_	Dilution
76-44-8	HeptachlorAldrin	ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND	0.05 0.05 0.05 0.05 0.05 0.05	1 1 1 1 1

RL = Reporting Limit

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Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-02 Client Sample ID: BG1116 Site/Work ID: PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

% Solid: N/A

Date Collected: 11/16/98

Instrument: HP9 Method: 8081A\3510C Run ID: R57178

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time: Analyst: ECL Lab File ID: 1525 Batch: WG50057

CAS #	Compound	Units	Result Qual	lifiers RL	Dilution	1
60 - 57-1	Dieldrin	ug/L	NI	0.1	0 1	
72-55-9	4,41-DDE	ug/L	NI			
72-20-8	Endrin.	ug/L	NI			
33213-65-9	Endosulfan II		NI	· · · · · · · · · · · · · · · · · · ·	-	
72-54-8	4,4'-DDD	ug/L				
1031-07-8	Endosulfan sulfate	ug/L	NI			
50-29-3	4 4 - DDT	ug/L	NI			
72-43-5	4,4'-DDT.	ug/L	ND			
53494-70-5	Methoxychlor	ug/L	ND			
7421-93-4	Endrin ketone	ug/L	ND		0 1	
	Endrin aldehyde	ug/L	ND		0 1	
5103-71-9	alpha Chiordane	ug/L	ND	0.0	5 1	
5103-74-2	gamma Chiordane	ug/L	ND	0.0	5 1	
8001-35-2	Toxapnene	uor/L	ND	1.0	1	
	gamma-BHC (Lindane)	ug/L	ND	0.0	5 <u>1</u>	
SURR	OGATES- In Percent Recovery:					
	2,4,5,6-Tetrachloro-m-xvlene	54.5	(13 -	154%)		
	Decachlorobiphenyl	89.0	1 77	140%)		

KEMRON ENVIRONMENTAL SERVICES

Login #L9812010 December 9, 1998 04:45 pm

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-02

Client Sample ID: BG1116

Dil. Type: N/A

COC Info: N/A

Extract Volume: N/A

TCLP Extract Date: N/A Instrument: HPMS7 Method: 8270C\3510C

Extract Date: 12/02/98 Analyst: MLS Run ID: R57120
Analysis Date: 12/04/98 Time: 17:50 Lab File ID: 6492 Batch: WG49979

"CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	ug/L	ND	11	2.2	
111-44-4	Bis (2-Chloroethyl) ether	ug/L	ND	11	2.2	
95-57-8	2-Chlorophenol	ug/L	ND	11	2.2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	11	2.2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	11	2.2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	11	2.2	
95-48-7	2-Methylphenol	ug/L	ND	11	2.2	
108-60-1	bis (2-Chloroisopropyl) ether	ug/L	, ND	11	2.2	
106-44-5	4-Methylphenol	ug/L	ND	11	2.2	
621-64-7	N-Nitroso-di-n-propylamine Hexachloroethane	ug/L	ND	11	2.2	
67-72-1	Hexachloroethane	ug/L	ND	11	2.2	
98-95-3	Nitrobenzene	uq/L	ND	11	2.2	
78-59-1	Isophorone	uq/L	ND	11	2.2	
88-75-5	2-Nitrophenol	uq/L	ND	11	2.2	
105-67-9	2.4-Dimethylphenol	ug/L	ND	11	2.2	
111-91-1	2,4-Dimethylphenol	uq/L	ND	11	2.2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	11	2.2	
120-82-1	1.2.4-Trichlorobenzene	ug/L	ND	11	2.2	
91-20-3	Naphthalene	ug/L	ND	11	2.2	
106-47-8	4-Chloroaniline	ug/L	ND	11	2.2	
87-68-3	Hexachlorobutadiene	ug/L	ND	11	2.2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	11	2.2	
91-57-6	2-Methylnaphthalene	ug/L	ND	11	2.2 2.2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	11		
88-06-2	2.4.6-Trichlorophenol	ug/L	ND	11	2.2 2.2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	55	2.2	
91-58-7	2-Chloronaphthalene	ug/L	, ND	11	2.2	
88-74-4	2-Nitroaniline	ug/L	ND	55		
131-11-3	Dimethylphthalate	ug/L	ND	11	2.2 2.2	
208-96-8	Acenaphthylene	ug/L	ND	11	2.2	
606-20-2	2.6-Dinitrotoluene	ug/L	ND	11	2.2	
99-09-2	3-Nitroaniline	ug/L	ND	55	2.2	
83-32-9	Acenaphthene	ug/L	ND	11	2.2	
51-28-5	2.4-Dinitrophenol	uq/L	ND	55 55	2.2	
100-02-7	4-Nitrophenol	ug/L	ND	35 11	2.2	
132-64-9	Dibenzofuran	ug/L	ND	11	2.2	
121-14-2	2.4-Dinitrotoluene	ug/L	ND	11	2.2	
84-66-2	Diethylphthalate	ug/L	ND	11	2.2	
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND		4.4	

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-02 Client Sample ID: BG1116 Site/Work ID: PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/16/98

% Solid: N/A

Instrument: HPMS7

Method: 8270C\3510C Run ID: R57120 Batch: WG49979

TCLP Extract Date: N/A Extract Date: 12/02/98 Analyst: MLS Lab File ID: 6492 Analysis Date: 12/04/98 Time: 17:50

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution.
86-73-7	Fluorene	/T				
100-01-6	1 Nitropend 1 in a	ug/L		ND	11	2.2
534-52 - 1	4,6-Dinitro-2-methylphenol	ug/L		ND	55	2.2
86 - 30 <i>-6</i>	N-Nitrosodiphenylamine	ug/L		MD	55	2.2
101-55-3	4.6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl-phenylether Hexachlorobenzene	ug/L		ND	11	2.2
118-74-1	Hexachlorobenzene	ug/L		ND	11	2.2
87-86-5	Pentachlorophenol	ug/L		ND	11	2.2
85-01-8	Phenanthrene	ug/L		ND ND	55	2.2
120-12-7	Anthracene	ug/L		ND ND	11	2.2
86-74-8	Carbazole	ug/L ug/L		ND ND	11	2.2
84-74-2	DI-M-BUCYIONCHAIACE	ug/L		ND	11	2.2
206-44-0	Fluoranthene	ug/L		ND	11	2.2
129-00-0	PVTANA	ug/L		ND	11	2.2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine.	ug/L		ND	11 11	2.2
91-94-1	3,3'-Dichlorobenzidine.	ug/L		ND	22	2.2
56-55-3	Benzo(a) anthracene	ug/L		ND		2.2
218-01-9	Chrysene.	ug/L		ND	11	2.2
117-81-7	DIS (2-ECHVINEXVI) ONUALATE	ug/L		ND	11	2.2
117-84-0	D1-N-Octviphthalate	ug/L		ND	11 11	2.2 2.2
205-99-2	Benzo(b) fluoranthene	ug/L		ND		2.2
207-08-9	Benzo(k) fluoranthene	ug/L		ND	11 11	2.2
50-32-8	Benzo(a)pvrene	ug/L		ND	11	2.2
193-39-5	Indeno (1,2,3-cd) pyrene. Dibenzo (a,h) Anthracene.	ug/L		ND	11	2.2
53-70-3	Dibenzo (a.h) Anthracene	ug/L		ND	11	2.2
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND ND	11	2.2
SURR	OGATES- In Percent Recovery:	ug/ D		ND	<u>.</u>	2.2
	2-Fluorophenol	49.7	(21 - 100%)		
	Phenol-d5	32.8		10 - 94%)		
	Nitrobenzene-d5	73.3		35 - 114%)		
	2-Fluorobiphenyl	79.5		43 - 116%)		
	2-Fluorobiphenyl	117		10 - 123%)		
	p-Terphenyl-d14	140		33 - 141%)		
	##	740	ι .	22 - TATA1		

KEMPON ENVIRONMENTAL SERVICES

Login #L9812010 December 9, 1998 04:45 pm

Product: 808-PCB-W - PCB's (Water)

Dil. Type: N/A COC Info: N/A Sample Weight: N/A Lab Sample ID: L9812010-03 Extract Volume: N/A Client Sample ID: BG1119

Site/Work ID: PEDRICKTOWN % Solid: N/A Matrix: Water Date Collected: 11/19/98

TCLP Extract Date: N/A Instrument: HP10 Method: 8082/3550 Extract Date: 12/01/98 Run ID: R57159 Analyst: CDB

Analysis Date: 12/02/98 Time: 17:59 Lab File ID: 010F0101 Batch : WG49924

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor-1016. Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1248 Aroclor-1254 Aroclor-1260	ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND	0.55 0.55 0.55 0.55 0.55 1.1	1.1 1.1 1.1 1.1 1.1 1.1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	75.9 88.6	(13 - 154%) (25 - 140%)			

Product: 8081P - Organochlorine Pesticides

Dil. Type: N/A COC Info: N/A Sample Weight: N/A Lab Sample ID: L9812010-03 Extract Volume: N/A Client Sample ID: BG1119

Site/Work ID: PEDRICKTOWN % Solid: N/A Date Collected: 11/19/98

Matrix: Water

Method: 8081A\3510C TCLP Extract Date: N/A Instrument: HP9 Run ID: R57178 Extract Date: 12/01/98
Analysis Date: 12/05/98 Time: Analyst: ECL Batch : WG50057 Lab File ID: 1526

Dilution RLResult Oualifiers Units CAS # Compound 0.055 1.1 ND alpha-BHC.....ug/L 319-84-6 1.1 0.055 ND beta-BHC.....ug/L 319-85-7 0.055 1.1 ND 319-86-8 delta-BHC..... ug/L 1.1 0.055 76-44-8 Heptachlor..... ug/L ND 0.055 1.1 309-00-2 Aldrin..... ug/L ND 0.055 1.1 ND 0.055 ND

RL = Reporting Limit

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Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-03 Client Sample ID: BG1119 Site/Work ID: PEDRICKTOWN

Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/19/98

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C Run ID: R57178

Analyst: ECL Lab File ID: 1526

Batch: WG50057

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
60-57-1 72-55-9 72-20-8 33213-65-9 72-54-8 1031-07-8 50-29-3 72-43-5 53494-70-5 7421-93-4 5103-71-9	Dieldrin. 4,4'-DDE. Endrin. Endosulfan II. 4,4'-DDD. Endosulfan sulfate. 4,4'-DDT. Methoxychlor. Endrin ketone. Endrin aldehyde.	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	ND ND ND ND ND ND ND ND ND	0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.15 0.11	1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1
5103-74-2 8001-35-2	alpha Chlordane. gamma Chlordane. Toxaphene. gamma-BHC (Lindane). OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene. Decachlorobiphenyl.	ug/L ug/L ug/L ug/L ug/L 55.7 86.6	ND ND ND ND (13 - 154%) (25 - 140%)	0.055 0.055 1.1 0.055	1.1 1.1 1.1 1.1

Login #L9812010 December 9, 1998 04:45 pm

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Extract Volume: N/A Lab Sample ID: L9812010-03 Client Sample ID: BG1119 Site/Work ID: PEDRICKTOWN Dil. Type: N/A COC Info: N/A

% Solid: N/A Matrix: Water Date Collected: 11/19/98

Method: 8270C\3510C Instrument: HPMS7

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 18:28 Run ID: R57120 Analyst: MLS Lab File ID: 6493 Batch : WG49979

CAS #	Compound	Units	Result Qualifiers	RL	Dilution	
108-95-2	Phenol	uq/L	ND	10	2	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10	2	
95-57-8	2-Chlorophenol	ug/L	ND	10	2	
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2	
106-46-7	1,4-Dichlorobenzene	ug/L	ND	10	2	
95-50-1	1,2-Dichlorobenzene	ug/L	ND	10	2	
95-48-7	2-Methylphenol	ug/L	ND	10	2	
108-60-1	bis(2-Chloroisopropyl)ether	ug/L	ND	10	2	
106-44-5	4-Methylphenol	ug/L	ND	10	2	
621-64-7	N-Nitroso-di-n-propylamine	ug/L	ND	10	2	
67-72-1	Hexachloroethane	ug/L	ND	10	2	
98-95-3	Nitrobenzene	ug/L	ND	10	2	
78-59-1	Isophorone	ug/L	ND	10	2	
88-75-5	2-Nitrophenol	ug/L	ND	10	2	
105-67-9	2,4-Dimethylphenol	ug/L	ND	1.0	2	
111-91-1	Bis (2-Chloroethoxy) Methane	ug/L	ND	10	2	
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2	
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2	
91-20-3	Naphthalene	ug/L	ND	10	2	
106-47-8	4-Chloroaniline	ug/L	ND	10	2	
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2	
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2	
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2	
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2	
88-06-2	2.4.6-Trichlorophenol	ug/L	ND	10	2	
95-95-4	2,4,5-Trichlorophenol	ug/L	ND	50	2	
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2	
88-74-4	2-Nitroaniline	ug/L	ND	50	2	
131-11-3	Dimethylphthalate	ug/L	ND	10	2	
208-96-8	Acenaphthylene	ug/L	ND	10	2	
606-20-2	2,6-Dinitrotoluene	ug/L	ND	10	2	
99-09-2	3-Nitroaniline	ug/L	ND	50	2	
83-32-9	Acenaphthene	ug/L	ND	10	2	
51-28-5	2,4-Dinitrophenol	ug/L	ND	50	2	
100-02-7	4-Nitrophenol	ug/L	ЙD	50	. 2	
132-64-9	Dibenzofuran	uq/L	ND	10	2	
121-14-2	2.4-Dinitrotoluene	ug/L	ND	10	4	
84-66-2	Diethylphthalate	uq/L	ND ND	10	2	
7005-72-3	4-Chlorophenyl-phenyl ether	uğ/L	ND	10	2	

RL = Reporting Limit

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-03 Client Sample ID: BG1119 Site/Work ID: PEDRICKTOWN Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/19/98

% Solid: N/A

Instrument: HPMS7

Method: 8270C\3510C Run ID: R57120

Batch : WG49979

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 18:28 Analyst: MLS Lab File ID: 6493

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
86-73-7	Fluorene	/+			
100-01-6	4-Nitroaniline	ug/L	MD	10	2
534-52-1	4,6-Dinitro-2-methylphenol.	ug/L	ND	50	2
86-30-6		ug/L	ND	50	2
101-55-3	4-Bromophenyl-phenylether	ug/L	ND	10	2
118-74-1	Hexachlorobenzene.	ug/L	ND	10	2
87-86-5	Pentachlorophenol	ug/L	ND	10	2
85-01-8	Phenanthrene	ug/L	ND	50	2
120-12-7	Anthracene	ug/L	ND	10	2
86-74-8	Carbazole.	ug/L	ND	10	2
84-74-2	Di-N-Butylphthalate	ug/L	ND	10	2
206-44-0	Fluoranthene	ug/L	ND	10	2
129-00-0	Pyrene	ug/L	йD	10	2
85-68-7	Butylbenzylphthalate. 3,3'-Dichlorobenzidine. Benzo(a) anthracene.	ug/L	ND	10	2
91-94-1	3.31-Dichlorobenzidine	ug/L	ND	10	2
56-55-3	Benzo(a) anthracene	ug/L	ND	20	2
218-01-9	Chrysene	ug/L	ND	10	2
117-81-7	Chrysene. bis(2-Ethylhexyl)phthalate.	ug/L	йD	10	2
117-84-0	Di-n-octylphthalate	ug/L	ND	10	2
205-99-2	Benzo (b) fluoranthene	ug/L	MD	10	2
207-08-9	Benzo (k) fluoranthene	ug/L	ND	10	2
50-32-8	Benzo (a) pyrene	ug/L	йD	10	2
193-39-5	Indeno(1,2,3-cd) pyrene	ug/L	MD	10	2
53-70-3	Dibenzo (a, h) Anthracene	ug/L	ND	10	2
191-24-2	Benzo (g, h, i) Perylene		ND	10	2
	beingo (g, m, r) retyrene	ug/L	ND	10	2
SURRO	GATES- In Percent Recovery:				
	2-Fluorophenol	45.5	(21 - 100%)		
	Phenol-d5	29.4	(10 - 94%)		
	Nitrobenzene-d5	68.7	(35 - 114%)		
	2-Fluorobiphenyl. 2,4,6-Tribromophenol.	73.4	(43 - 116%)		
	2,4,6-Tribromophenol	109	(10 - 123%)		
	p-Terphenyl-d14	129	(33 - 141%)		
	E	149	/ 33 _ T#T#\		

Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-03 Client Sample ID: BG1119 Site/Work ID: PEDRICKTOWN Matrix: Water Sample Weight: N/A Extract Volume: N/A Dil. Type: N/A COC Info: N/A

Date Collected: 11/19/98 % Solid: N/A

TCLP Extract Date: N/A
Extract Date: N/A
Analysis Date: 12/03/98 Time: 13:47 Instrument: HPMS8
Analyst: JLH
Lab File ID: 8-5572 Method: 8260B Run ID: R57170 Batch : WG49967

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane	ug/L	ND	10	1
74-83-9	Bromomethane	ug/L	ND	10	1
75-01-4	Vinyl chloride	ug/L	ND	10	1.
75-00-3	Chloroethane	ug/L	ND	10	1
75-09-2	Methylene chloride	ug/L	ND	5.0	1
67-64-1	Acetone	ug/L	ND	10	1
75-15-0	Carbon disulfide	ug/L	ND	5.0	1
75-35-4	1,1-Dichloroethene	ug/L	ND	5.0	1
75-34-3	1,1-Dichloroethane	ug/L	ND	5.0	1
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	1
67-66-3	Chloroform	ug/L	ИD	5.0	1
107-06-2	1,2-Dichloroethane	ug/L	ND	5.0	1
78-93-3	2-Butanone	ug/L	йD	10	<u> </u>
71-55 - 6	1,1,1-Trichloroethane	ug/L	ND	5.0	<u> </u>
56-23-5	Carbon tetrachloride	ug/L	йD	5.0	1
75-27-4	Bromodichloromethane	ug/L	ND	5.0	<u> </u>
78-87-5	1,2-Dichloropropane	uġ/L	ЙD	5.0	<u>+</u>
10061-01-5	cis-1,3-Dichloropropene	uġ/L	ND	5.0 5.0	± -
79-01-6	Trichloroethene	ug/L	мD	5.0	1
124-48-1	Dibromochloromethane	ug/L	0.34 J	5.0	‡
79-00-5	1,1,2-Trichloroethane	ug/L	ND ND	5.0	†
71-43-2	Benzene	ug/L	ND ND	5.0	i
10061-02-6	trans-1,3-Dichloropropene	ug/L	1.3 J	5.0	†
75-25-2	Bromoform	ug/L	1.3 UND	10	ī
108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	ī
591-78-6	2-Hexanone	ug/L	ND	Š.0	3
127-18-4	Tetrachloroethene	ug/L	ND	5.0	ī
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	ī
108-88-3	Toluene	ug/L	ND	5.0	ī
108-90-7	Chlorobenzene	ug/L	ND	5.0	ī
100-41-4	Ethyl benzene	ug/L	ND	5.0	ī
100-42-5	Styrene	ug/L	ND	5.0	ī
1330-20-7	Xylenes, Total	ug/L	ND		
SURR	OGATES- In Percent Recovery:		/ 06 1108)		
	Dibromofluoromethane	106	(86 ~ 118%)		
	Toluene-d8	94.			
	p-Bromofluorobenzene	94.	.7 (86 - 115%)		
	1,2-Dichloroethane-d4	106	(80 - 120%)		

RL = Reporting Limit

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TCLP Extract Date: N/A

Product: 808-PCB-W - PCB's (Water)

Lab Sample ID: L9812010-04 Client Sample ID: EB112598 Site/Work ID: PEDRICKTOWN

Matrix: Water

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

ND

ND

ND

Date Collected: 11/25/98

% Solid: N/A

Instrument: HP10 Analyst: CDB

Method: 8082/3550 Run ID: R57159

0.50

0.50

0.50

0.50

1.0

1.0

Dilution

1

1

1

1

1

1

Extract Date: 12/01/98 Analysis Date: 12/02/98 Time: 18:34 Lab File ID: 011F0101 Batch : WG49924 CAS # Compound Units Result Qualifiers Aroclor-1016..... ug/L 12674-11-2 0.50 11104-28-2 Aroclor-1221..... ug/L

11096-82-5 Aroclor-1260..... ug/L ND SURROGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene..... 70.0 (13 - 154%) Decachlorobiphenyl..... 61.5 (25 - 140%)

Product: 8081P - Organochlorine Pesticides

11141-16-5 Aroclor-1232..... ug/L

11097-69-1 Aroclor-1254..... ug/L

Lab Sample ID: L9812010-04 Client Sample ID: EB112598 Site/Work ID: PEDRICKTOWN

Matrix: Water

Date Collected: 11/25/98

Dil. Type: N/A COC Info: N/A

% Solid: N/A

Sample Weight: N/A Extract Volume: N/A

TCLP Extract Date: N/A

Extract Date: 12/01/98

Analysis Date: 12/05/98 Time:

Instrument: HP9 Analyst: ECL Lab File ID: 1527

Method: 8081A\3510C Run ID: R57178 Batch: WG50057

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
319-84-6	alpha-BHC	ug/L	ND	0.05	1
319-85-7	beta-BHC	ua/L	ND	0.05	1
319-86-8	delta-BHC	ug/L	ND	0.05	1
76-44-8	Heptachlor	uā/L	ND	0.05	1
309-00-2	Aldrin	uā/L	ND	0.05	1
1024-57-3	Heptachlor epoxide	ug/L	ND	0.05	1
959-98-8	Endosulfan I	ug/L	ND	0.05	1

KEMRON ENVIRONMENTAL SERVICES

Login #L9812010 December 9, 1998 04:45 pm

Product: 8081P - Organochlorine Pesticides

Lab Sample ID: L9812010-04 Client Sample ID: EB112598 Site/Work ID: PEDRICKTOWN

Matrix: Water

TCLP Extract Date: N/A
Extract Date: 12/01/98
Analysis Date: 12/05/98 Time:

Dil. Type: N/A COC Info: N/A

Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/25/98

% Solid: N/A

Instrument: HP9

Method: 8081A\3510C

Analyst: ECL Lab File ID: 1527 Run ID: R57178 Batch: WG50057

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
60-57-1 72-55-9	Dieldrin4,4'-DDE	ug/L ug/L		ND ND	0.10 0.10	1	
72-20-8 33213-65-9	Endrin. Endosulfan II.	ug/L		ND ND	0.10 0.10	1	
72-54-8 1031-07-8	4.4'-DDD	ug/L ug/L		ND ND	0.10 0.10	ī	
50-29-3	Endosulfan sulfate	ug/L ug/L		ND	0.10	i	
72-43-5 53494-70-5	Methoxychlor. Endrin ketone.	ug/L ug/L		ND ND	0.50 0.10	1	
7421-93-4 5103-71-9	Endrin aldehydealpha Chlordane	ug/L ug/L		ND ND	0.10 0.05	1	
5103-74-2 8001-35-2	gamma Chlordane	ug/L ug/L		ND ND	0.05 1.0	1	
	gamma-BHC (Lindane)	ug/L		ИD	0.05	1	
SURR	OGATES- In Percent Recovery: 2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl	53.8 61.0		13 - 154%) 25 - 140%)			

Product: 827-TCL - TCL Semivolatiles

Lab Sample ID: L9812010-04 Client Sample ID: EB112598 Site/Work ID: PEDRICKTOWN Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Matrix: Water Date Collected: 11/25/98 % Solid: N/A

Instrument: HPMS7 Method: 8270C\3510C

TCLP Extract Date: N/A
Extract Date: 12/02/98
Analysis Date: 12/04/98 Time: 19:06 Analyst: MLS Lab File ID: 6494 Run ID: R57120 Batch : WG49979

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
108-95-2	Phenol	ug/L	ND	1.0	
111-44-4	Bis(2-Chloroethyl)ether	ug/L	ND	10 10	2
95-57-8	2-Chiorophenol	ug/L	ND	10	2
541-73-1	1,3-Dichlorobenzene	ug/L	ND	10	2
106-46-7	1,4-Dichiorobenzene	ug/L	ND	10	2
95-50-1	1,4-Dichioropenzene	ug/L	ND	10	2
95-48-7	2-Methylphenol	ug/L	ND	10	2
108-60-1	D18(2-Chloroisopropy)ether	ug/L	ND	10	2
106-44-5	4-Mechylphenol	ug/L	ND	10	
621-64-7	N-NICLOSO-GI-H-Dropviamine	ug/L	ND	10	2
67-72-1	nexachtoroethane	ug/L	ND	10	2
98-95-3	Nitrobenzene	ug/L	ND	10	2
78-59-1	Isophorone	ug/L	du	10	2
88-75-5	2-Nitrophenol	ug/L	ND	10	2
105-67-9	2,4-Dimethylphenol	ug/L	ND	10	2
111-91-1	BIS(4-Chioroethoxy)Methane	ug/L	ND	10	2
120-83-2	2,4-Dichlorophenol	ug/L	ND	10	2 2
120-82-1	1,2,4-Trichlorobenzene	ug/L	ND	10	2
91-20-3	Naphthalene	ug/L	ND	10	2
106-47-8	4-Chloroaniline	ug/L	ND	10	2
87-68-3	Hexachlorobutadiene	ug/L	ND	10	2
59-50-7	4-Chloro-3-methylphenol	ug/L	ND	10	2
91-57-6	2-Methylnaphthalene	ug/L	ND	10	2
77-47-4	Hexachlorocyclopentadiene	ug/L	ND	10	2
88-06-2	2,4,6-Trichlorophenol	ug/L	ND	10	2
95-95-4	2,4,5-Trichlorophenol	ug/L	, ND	50	ž
91-58-7	2-Chloronaphthalene	ug/L	ND	10	2
88-74-4	2-Nitroaniline	ug/L	ND	50	2
131-11-3	Dimethylphthalate		ND	10	2
208-96-8	Acenaphthylene	ug/L ug/L	ND	10	2
606-20-2	2,6-Dinitrotoluene	ug/L	ND ND	10	2
99-09-2	3-Nitroaniline	110 / L	ND	50	2
83-32-9	Acenaphthene	ug/L	ND		2
51-28-5	2,4-Dinitrophenol	ug/L		10	2
100-02-7	4-Nitrophenol	ug/L	ND	50	4
132-64-9	Dibenzofuran	ug/L	ND	50	2
121-14-2	2,4-Dinitrotoluene	ug/L	ND	10	2
84-66-2	Districtorolucies,	ug/L	ND	10	2
	Diethylphthalate	ug/L	ND	10	2
7005-72-3	4-Chlorophenyl-phenyl ether	ug/L	ND	10	2

KEMRON ENVIRONMENTAL SERVICES

Product: 827-TCL - TCL Semivolatiles

Sample Weight: N/A Dil. Type: N/A COC Info: N/A Lab Sample ID: L9812010-04 Client Sample ID: EB112598
Site/Work ID: PEDRICKTOWN Extract Volume: N/A

Matrix: Water Date Collected: 11/25/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: 12/02/98 Method: 8270C\3510C Instrument: HPMS7

Analyst: MLS Lab File ID: 6494 Run ID: R57120 Analysis Date: 12/04/98 Time: 19:06 Batch: WG49979

CAS #	Compound	Units	Result	Qualifiers	RL	Dilution	
86-73-7	Fluorene	ug/L		ND	10	2	
100-01 - 6	4-Nitroaniline	ug/L		ND	50	2	
534-52-1	4,6-Dinitro-2-methylphenol	ug/L		ND	50	2	
86-30-6	N-Nitrosodiphenylamine	ug/L		ND	10	2	
101-55-3	4-Bromophenyl-phenylether	ug/L		ND	10	2	
118-74-1	Hexachlorobenzene	ug/L		ND	10	2	
87-86-5	Pentachlorophenol	ug/L		ND	50	2	
85-01-8	Phenanthrene	ug/L		ND	10	2	
120-12-7	Anthracene	ug/L		ND	10	2	
86-74-8	Carbazole	ug/L		ND	10	2	
84-74-2	Di-N-Butylphthalate	ug/L		ND	10	2	
206-44-0	Fluoranthene	ug/L		ND	10	2	
129-00-0	Pyrene	ug/L		ИD	10	2	
85-68-7	Butylbenzylphthalate	ug/L		ИD	10	2	
91-94-1	3,3'-Dichlorobenzidine	ug/L		ND	20	2	
56-55-3	Benzo(a) anthracene	ug/L		ЙĎ	10	2	
218-01-9	Chrysenebis(2-Ethylhexyl)phthalate	ug/L		ИD	10	4	
117-81-7	pis(2-Ethylnexyl)phthalate	ug/L		MD	10 10	2	
117-84-0	Di-n-octylphthalate	ug/L		ИD	10	2	
205-99-2 207-08-9	Benzo (b) fluoranthene	ug/L		ND ND	10	2	
207-08-9 50-32-8	Benzo(k) fluoranthene	ug/L		ND ND	10	2	
193-39-5	Benzo(a) pyrene	ug/L		ND	10	2	
53-70-3	Indeno (1, 2, 3-cd) pyrene	ug/L		ND	10	2	
191-24-2	Dibenzo (a, h) Anthracene	ug/L		ND .	10	2	
191-24-2	Benzo(g,h,i)Perylene	ug/L		ND		~	
SURR	OGATES- In Percent Recovery:						
	2-Fluorophenol	36.3	(21 - 100%)			
	Phenol-d5	22.9	į	10 - 94%)			
	Nitrobenzene-d5	59.6	į	35 - 114%)			
	2-Fluorobiphenyl	64.3	ì	43 - 116%)			
	2,4,6-Tribromophenol	103	Ì	10 - 123%)			
	p-Terphenyl-d14	148	* (33 - 141%)			
			•				

Quint's solution 500.04

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Product: 826-TCL - TCL Volatiles

Lab Sample ID: L9812010-04 Client Sample ID: EB112598 Site/Work ID: PEDRICKTOWN Matrix: Water Dil. Type: N/A COC Info: N/A Sample Weight: N/A Extract Volume: N/A

Date Collected: 11/25/98 % Solid: N/A

TCLP Extract Date: N/A Extract Date: N/A Analysis Date: 12/03/98 Time: 14:23 Instrument: HPMS8 Method: 8260B

Analyst: JLH Lab File ID: 8-5573 Run ID: R57170 Batch : WG49967

CAS #	Compound	Units	Result Qualifiers	RL	Dilution
74-87-3	Chloromethane		NTD.		
74-83-9	Bromomethane	ug/L	ND ND	10	į
75-01-4	Vinyl chloride	ug/L	ND	10	<u> </u>
75-00-3	Chloroethane	ug/L	ND ND	10	<u> </u>
75-09-2	Methylene chloride	ug/L		10	<u> </u>
67-64-1	Acetone.	ug/L	ND ND	5.0	į
75-15-0	Carbon disulfide	ug/L	ND ND	10 5.0	<u>.</u>
75-35-4	1,1-Dichloroethene	ug/L	ND ND		1
75-34-3	1,1-Dichloroethane	ug/L ug/L	ND ND	5.0 5.0	<u> </u>
540-59-0	1,2-Dichloroethene (Total)	ug/L	ND	5.0	<u> </u>
67-66-3	Chloroform	ug/L	ND	5.0	÷
107-06-2	1,2-Dichloroethane		ND ND	5.0	<u> </u>
78-93-3	2-Butanone	ug/L ug/L	2.6 J	10	1
71-55-6	1,1,1-Trichloroethane	ug/L	2.0 U ND	5.0	1
56-23-5	Carbon tetrachloride	ug/L	ND	5.0	± -
75-27-4	Bromodichloromethane	ug/L	ND	5.0	± 1
78-87-5	1,2-Dichloropropane	ug/L	ND	5.0	†
10061-01-5	cis-1,3-Dichloropropene	ug/L	ND	5.0	†
79-01-6	Trichloroethene	ug/L	ND	5.0	*
124-48-1	Dibromochloromethane	ug/L	ND	5.0	-
79-00-5	1,1,2-Trichloroethane	ug/L	· ND	5.0	†
71-43-2	Benzene	ug/L	ND	5.0	i
10061-02-6	trans-1,3-Dichloropropene	ug/L	ND	5.0	ī
75-25-2	Bromoform	ug/L	ND	5.0	ī
108-10-1	4-Methyl-2-pentanone	ug/L	ND	10	ī
591-78-6	2-Hexanone	ug/L	ND	10	ī
127-18-4	Tetrachloroethene	ug/L	ND	5.0	ī
79-34-5	1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	ī
108-88-3	Toluene	ug/L	ND	5.0	ī
108-90-7	Chlorobenzene	ug/L	ND	5.0	ī
100-41-4	Ethyl benzene	ug/L	ND	5.0	ī
100-42-5	Styrene	ug/L	ND	5.0	ī
1330-20-7	Xylenes, Total	ug/L	ND	5.0	ī
SURR	OGATES- In Percent Recovery:				
	Dibromofluoromethane	108	(86 - 118%)		
	Toluene-d8	95.2	(88 - 110%)		
	p-Bromofluorobenzene	94.8	(86 - 115%)		
	1,2-Dichloroethane-d4	108	(80 - 120%)		

Login #L9812010 December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES

Lab Sample ID: L9812010-05 Client Sample ID: WEIR112498 Site/Work ID: PEDRICKTOWN

Matrix: Water

Collected: 11/24/98 N/A COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	19		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-06 Client Sample ID: WEIR1123 Site/Work ID: PEDRICKTOWN

Matrix: Water

Collected: 11/23/98 N/A COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	17		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-07 Client Sample ID: WEIR1122 Site/Work ID: PEDRICKTOWN

Matrix: Water Collected: 11/22/98 N/A COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time Method	
Total Suspended Solids	mg/L	13		5.0	1	N/A	DLN	12/01/98	16:20 160.2	

Lab Sample ID: L9812010-08 Client Sample ID: WEIR1121 Site/Work ID: PEDRICKTOWN

Matrix: Water Collected: 11/21/98 N/A COC Info: N/A

Note that the second is a

Analyte	Units	Result	Qualifiers	RL	Dil	Type	Analyst	Analysis Date	Time	Method	
Total Suspended Solids	mg/L	10		5.0	1	N/A	DLN	12/01/98	16:20	160.2	

RL = Reporting Limit

Login #L981 0 December 9, 1998 04:45 pm

KEMRON ENVIRON NTAL SERVICES

Lab Sample ID: L9812010-09 Client Sample ID: WEIR1120 Site/Work ID: PEDRICKTOWN

Matrix: Water Collected: 11/20/98 N/A

COC Info: N/A

Analyte	Units	Result	Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	7.5		5.0	1	N/A	DLN	12/01/98	16:20	160.2

Lab Sample ID: L9812010-10 Client Sample ID: WEIR1119 Site/Work ID: PEDRICKTOWN

Matrix: Water Collected: 11/19/98 N/A

COC Info: N/A

Analyte	Units	Result Qualifiers	RL	Dil	Туре	Analyst	Analysis Date	Time	Method
Total Suspended Solids	mg/L	12	5.0	1	N/A	DLN	12/01/98	16:20	160.2

Order #: 98-12-010 December 9, 1998 04:45 pm

KEMRON ENVIRONMENTAL SERVICES WORK GROUPS

Work Group	Dum ID		Dil	.	.	Date	
	Run ID		Type Matrix	Product	Method	Collected	Department
WG49913	R57178	L9812010-01	Water	Organochlorine Pesticides	8081A\3510C	24-NOV-1998	Extraction
WG49913	R57178	L9812010-02	Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Extraction
WG49913	R57178	L9812010-03	Water	Organochlorine Pesticides	8081A\3510C	19-NOV-1998	Extraction
WG49913	R57178	L9812010-04	Water	Organochlorine Pesticides	8081A\3510C	25-NOV-1998	Extraction
WG49914	75755						
WG49914	R57159 R57159	L9812010-01	Water	PCB's (Water)	8082/3550	24-NOV-1998	Extraction
WG49914		L9812010-02	Water	PCB's (Water)	8082/3550	16-NOV~1998	Extraction
WG49914	R57159	L9812010-03	Water	PCB's (Water)	8082/3550	19-NOV-1998	Extraction
4043314	R57159	L9812010-04	Water	PCB's (Water)	8082/3550	25-NOV-1998	Extraction
WG49924	R57159	L9812010-01	10 a.b				
WG49924	R57159	L9812010-01	Water	PCB's (Water)	8082/3550	24-NOV-1998	Semivolatile - GC
WG49924	R57159	L9812010-02	Water	PCB's (Water)	8082/3550	16-NOV-1998	Semivolatile - GC
WG49924	R57159	L9812010-03	Water	PCB's (Water)	8082/3550	19-NOV-1998	Semivolatile - GC
	22,123	D3812010-04	Water	PCB's (Water)	8082/3550	25-NOV-1998	Semivolatile - GC
WG49936	R57120	L9812010-01	Water	MOT Complete 3 and 3 and	*****		
WG49936	R57120	L9812010-01	Water	TCL Semivolatiles	8270C\3510C	24-NOV-1998	Extraction
WG49936	R57120	L9812010-02	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Extraction
WG49936	R57120	L9812010-03		TCL Semivolatiles	8270C\3510C	19-NOV-1998	Extraction
		113012010-04	Water	TCL Semivolatiles	8270C\3510C	25-NOV-1998	Extraction
WG49956	R56962	L9812010-05	Water	Total Suspended Solids	160.2	24 1/01/ 1000	G
WG49956	R56962	L9812010-06	Water	Total Suspended Solids	160.2	24-NOV-1998	Conventionals
WG49956		L9812010-07	Water	Total Suspended Solids	160.2	23-NOV-1998	Conventionals
WG49956	R56962	L9812010-08	Water	Total Suspended Solids	160.2	22-NOV-1998	Conventionals
WG49956	R56962	L9812010-09	Water	Total Suspended Solids	160.2	21-NOV-1998	Conventionals
WG49956	R56962	L9812010-10	Water	Total Suspended Solids	160.2	20-NOV-1998	Conventionals
			HULCE	iocal Suspended Solids	100.2	19-NOV-1998	Conventionals
WG49967	R57170	L9812010-01	Water	TCL Volatiles	8260B	24-NOV-1998	Volatile - GC/MS
WG49967	R57170	L9812010-03	Water	TCL Volatiles	8260B	19-NOV-1998	Volatile - GC/MS
WG49967	R57170	L9812010-04	Water	TCL Volatiles	8260B	25-NOV-1998	Volatile - GC/MS
				100 1010100	02,000	25-801-2550	volacile - GC/NB
WG49979	R57120	L9812010-01	Water	TCL Semivolatiles	8270C\3510C	24-NOV-1998	Semivolatile - GC/MS
WG49979	R57120	L9812010-02	Water	TCL Semivolatiles	8270C\3510C	16-NOV-1998	Semivolatile - GC/MS
WG49979		L9812010-03	Water	TCL Semivolatiles	8270C\3510C	19-NOV-1998	Semivolatile - GC/MS
WG49979	R57120	L9812010-04	Water	TCL Semivolatiles	8270C\3510C	25-NOV-1998	Semivolatile - GC/MS
					:		
WG50057	R57178	L9812010-01	Water	Organochlorine Pesticides	8081A\3510C	24-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-02	Water	Organochlorine Pesticides	8081A\3510C	16-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-03	Water	Organochlorine Pesticides	8081A\3510C	19-NOV-1998	Semivolatile - GC
WG50057	R57178	L9812010-04	Water	Organochlorine Pesticides	8081A\3510C	25-NOV-1998	Semivolatile - GC
				•	******	***	- -

KEMRON ANALYST LIST

Ohio Valley Laboratory

10/28/98

ALC - - Ann L. Clark BAD - - Becky A. Diehl CEB - - Chad E. Barnes CDB - - Christy D. Burton CLH - - Chris L. Hurst CMS - - Crystal M. Stevens CRC - - Carla R. Cochran DIH - - Deanna I. Hesson DKM - - Dewey K. Miller DLN - - Deanna L. Norton DLP - - Dorothy L. Payme ECL - Eric C. Lawson FEH - - Fay E. Harmon HV - - Hema Vilasagar JLH - - Janice L. Holland JWR - - John W. Richards JYH - - Ji Y. Hu KHA - - Kim H. Archer KAS - - Kevin A. Stutler KRA - - Kathy R. Albertson MDA - - Mike D. Albertson

MDC - - Michael D. Cochran MES - - Mary E. Schiling MLS - - Michael L. Schimmel MMB - - Maren M. Beerv RDC - - Rebecca D. Cutlip RDS - - Rebecca D. Sutton REF - - Ron E. Fertile REK - - Robert E. Kyer RSS - - Regina S. Simmons RWC - Rodney W. Campbell SJK - - Sindy J. Kinney SJM - - Shawn J. Marshall SLP - - Sheri L. Pfalzgraf SLT - - Stephanie L. Tepe SMW - - Shauna M. Welch SPL - - Steve P. Learn TJW - - Thomas J. Ware TRS - - Todd R. Stack VC - Vicki Collier VMN - - Vincent M. Nedeff

KEMRON Environmental Services, Inc. LIST OF VALID QUALIFIERS (qual) March 9, 1998

Quali	fier Description	Qualifier	Description
(A)	See the report narrative	N	Tentatively Identified Compound (TIC)
(B)	See the report narrative	NA	Not applicable
(C)	See the report narrative	ND	Not detected at or above the reporting limit (RL)
+	Correlation coefficient for the MSA is less than 0.995	NF	Not found
<	Less than	NFL	No free liquid
>	Greater than	NI	Non-ignitable
В	Present in the method blank	NR	Analyte is not required to be analyzed
С	Confirmed by GC/MS	NS	Not spiked
*	Surrogate or spike compound out of range	P	Concentration > 25% difference between the two GC columns
CG	Confluent growth	QNS	Quantity not sufficient to perform analysis
D	The analyte was quantified at a secondary dilution factor	Ŕ	Analyte exceeds regulatory limit
DL	Surrogate or spike was diluted out	RA	Reanalysis confirms reported results
E	Estimated concentration due to sample matrix interference	RE	Reanalysis confirms sample matrix interference
F	Present below nominal reporting limit (AFCEE only)	S	Analyzed by method of standard addition
FL	Free liquid	SMI	Sample matrix interference on surrogate
I	Semiquantitative result, out of instrument calibration range	SP	Reported results are for spike compounds only
J	Present below nominal reporting limit	TNTC	Too numerous to count
L	Sample reporting limits elevated due to matrix interference	U	Analyzed for but not detected
M	Duplicate injection precision not met	W	Post-digestion spike for furnace AA out of control limits
		X	Can not be resolved from isomer. See below.

Special Notes for Organic Analytes

- 1. Acrolein and acrylonitrile by method 624 are semiquantitative screens only.
- 2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
- 3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
- 4. 3-Methyphenol and 4-Methyphenol are unresolvable compounds.
- 5. m-Xylene and p-Xylene are unresolvable compounds.
- 6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.







INORGANIC QA/QC



KEMRON ENVIRONMENTAL SERVICES OHIO VALLEY LABORATORY QUALITY CONTROL SUMMARY

> WORKGROUP: wg49956

METHOD:

160.2

RUN DATE: 12/1/98

ANALYST: din

MATRIX: Water UNITS: mg/L

DUPLICATE: 12-008-01

												PERCENT RPD					
ANALYTE	RDL	Blank	T-LCS	LCS	REP1	REP2	SAMPLE RESULT	T-MS	MS	LCS	LCS LCL	LCS UCL	MS	MS LCL	MS UCL	REP RPD	RPD UCL
TSS	5.00	ND	50.00	46.00	29.00	25.00	NR	NR	NR	92.0	81.0	114.5	NR	NR	NR	14.81	20.00

NOTES & DEFINITIONS:

RDL = REPORTING DETECTION LIMIT

OL = DILUTED OUT NA = NOT APPLICABLE ND = NOT DETECTED

NR = NOT REQUIRED

LCS = LABORATORY CONTROL SAMPLE

T-LCS = TRUE VALUE OF LCS

REP1 = UNSPIKED SAMPLE REPLICATE 1

REP2 = UNSPIKED SAMPLE REPLICATE 2

SAMPLE RESULT = CONCENTRATION OF UNSPIKED MATRIX

T-MS = TRUE VALUE OF MATRIX SPIKE

MS = MATRIX SPIKE

LCL = LOWER CONTROL LIMIT UCL = UPPER CONTROL LIMIT REP RPD = RELATIVE PERCENT DIFFERENCE OF SAMPLE REPLICATES

ORGANIC QA/QC



Kennron Environmental Services -OVL Volattie Quality Centrol Summary

LCS DF: SMPL Num: 11-380-23 Workgroup #: wg649967 Run Date: 12/3/98 SMPL DF: 1000 SMPL FLNM: 8 5567.D Method: 8260B Instrument ID: HPMS 8 MS FLNM: 8_5569.D MSD FLNM: 8_5570.D MS DF: 1000 Matriz: WATER BLK FLNM: 8_5564.D 1000 MSD DF: LCS FLNM: 8_5565.D Units: ug/L

		CONCENTRATION, PPB								PERCENT RECOVERY									PERCENT RPD			OUTLIERS					
		CONCENTRATION, FFB																		त्र							
	RDL	<u>.</u>		LCS Spilo		MS	MSD	MS Spike Level	BLK	LCS	LCS	LCS UCL	SMPL	MS	MSD	MS LCL	MS UCL	MS RPD	RPD UCL	뵱	ខ្ម	Semple	MS	MSD.	S S		
		Blank	LCS	Level	Sample	ug/L		ng/L	%	*	%	%	%	36	%	%	%	%	%	 "	17	<u> </u>	٦	T			
Target Analytes	ug/L 10.0	ug/L	ug/L 20.8	ug/L 20.0	ug/L ND	19878.6	ug/L 20334.6	25600.0	ND	1042	38.0	148.0	ND.	99.4	1017	60.0	1400	13	20.0			***					
chloromethane	10.0	ND ND	17.9	20.0	ND	17431.9	17894.7	20000.0	ND	89.3	56.0	132.0	ND	87.2	89.5	D	273.0	2.6	20.0	1					i		
vinvi chloride	10.0	סא	13.7	20.0	34657.8	55805.0	355653	20000.0	ND	118.3	68.0	125.0	34657.8	105.7	104.5	O O	251.0	0.4	20.0								
bromomethane	10.0	ND	29.6	20.0	ND	28513.2	29129.6	20000.0	ND	148.0	55.0	138.0	ND	142.6	145.6	D	242.0	2.1	20.0		н				L		
chierosthune	100	ND	219	20.0	ND	21005.B	21770.5	20000.0	ND	109.4	70.0	1280	ND	1050	108.9	14.0	230,0	3.6	20.0								
trichlorofluoromethane	10.0	ND	25.6	20.0	ND	24781.9	25638.7	20000.0	ND	128.0	70.0	127.0	ND	123.9	128.2	17.0	181.0	3.4	20.0	l	H	ensente.	22200	000000	Iornas		
isoptetie	NTC	ND	NS	20.0	ND .	NS	NS :	20000 0	ND	NS	NA.	NA.	. ND	ŅS ∭	N5	NA NA	NA NA	NA NA	20.0 20.0	100000	3333	2000	888880		20000		
acrolem	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA WAYNA	NA	ND	NS NS	NS NS	70.0	130.0	NA:	20.0	338608	68888	S86389	10000	858888	19888		
freon 113	MTC	ND	NS	20.0	ND	NS	NS.	20000.0	ND	NS	NA.		ND	84.4	89.I	70.0	130.0	5.4	20.0	1,000000	5000000	265,000	3555000	020.000	1000000		
acetone	100.0	ND	17,4	20.0	ND	16884.9	17815.3	20000.0	ND	86.8	44.0	114.0 144.0	ND DN	103.0	(08.0	, D	2310	48	20.0	200000	*****		88883	(SSS)	(8) (8)		
1,1-dichleroethene	50	ND	21.3	20.0	ND.	20603.7	2160KJ	30000.0	MD	106.5	69.D NA		ND	NS	NS	NA	NA	NA	20.0	188888	200000	(20,000)	3333993	pa-2000000-10-	yaastaat I		
dimethyl sulfide	NTC	סא	NS	20.0	ND	NS	NS	20000.0	ΝD	NS 118.2	NA NA	NA NA	ND DN	114.9	NS 122.4	70.0	130.0	6.4	20.0	ľ	1 1	- 1	ıı	. 1	ı		
iodomethane	NTC	ND	23.6	20.0	ND	22974.0	24482.5	20000.0	ND	951	71.0	128.0	ם מא	93.4	96.6	(D)	221 Q	33	20.0	28883	1	2000			688		
methylene cilloride	50	ND	19.0	20.0	ND	18687.3	19311.4	20000.0	ND ND	113.3	67.0	136.0	ND	108.9	112.3	70.0	130.0	3.1	20.0	10000000	10000000	,000000		0330000	-cevees I		
carbon disulfide	5.0	ND	22.7	20.0	ND	21775.2	22457.3	20000.0	ND N	NS	NA	NA	ND	NS.	NS	70.0	130.0	⊗NA :	20.0	3333	2000	3866i		888	<i>1</i> 888		
acrylonittle	NTC	ND	NS	20.0	МD	NS	NS	20000.0	*****	NS	NA.	NA	ND	NS	NS	NA	NA	NA	20.0	10000000	59/8007	5000000	0000000	3 000000	10000000 		
methyl-tert-butyl ether	NTC	ND	NS	20.0	ND	NS Nacional	NS	20000.0	ND	1093	85.0	133.0	2194.3	104.4	108.8	54.0	156.b	33	20.0				***	3333	(3) (S)		
trans-1,2-dichimosthene	1.0	NO	21.9	20.0	2194.3	23073.7	23946.2	20000.0	ND	NS NS	NS NS	NS	ND	NA.	NA	NA	NA	NA	20.0	990640	, resected	000000	300000	5000001	500,000 		
n-hexane	NTC	ND	NS	20.0	NS	NS	NS	20000.0	ND ND	90.0	90	2366	ND.	87.4	923 ×	9.0	236.h	853 S	20.0	3333					6000		
vinyl acetate	10.0	ND	18.0	20.0	MD	174743	18467.9	20000.0	ND	105.6	82.0	124.0	ND	99.6	101.4	59.0	155.5	1.8	20.0	-9700000	0000000	0000000	9000000	20000000	100100		
1,1-dichtoroethane	5.0	ND	21.1	20.0	МD	19925.9	20287.5	20000.0	ND	80.2	43.0	140.5	ND	77.2	811	70.0	130.0	49	20.0	3334					#		
2-butanone	100.0	NO	16.0	20.0	ND	15440.3 20998.3	16711.6	20000.0	ND	110.4	77.0	126.0	ND	105.0	108.8	60.0	140.0	3.6	20.0	100000			******		Accessors		
2,2-dichloropropens	5.0 201004040000	ND	22.1	20.0	ND	151603.2	21764.5 152810.3	20000.0	ND.	100.4	69.0	130.0	137189.0	72.1	78.1	60.0	£40.0	0.8	20.0	3000	2000				(323)		
cis-1,2-dichloroethere	5.0	ND	20.1	20.0	137189.0	21251.2	K 2977-7703334	20000.0	ND	110.5	83.0	************ 121.0	ND	106.3	108.5	51.0	138.0	2.1	20.0	000000	1		******		1		
chjoroform	5.0	ND	22.1	20.0	ND	222943	21692.0 23131.7	20000.0	NO	116.2	85.0	1180	ND	nis	113.7	60.0	140.0	37	26.0	200							
bromochlorometisene		ND	23.2	20.0 20.0	ND ND	20765.8	21626.5	20000.0	ND	107.7	74.0	125.0	ND	103.8	108.1	52.0	162.0	4.1	20.0	Twas-	,		[1		
1,1,1-trichloroethane	5.0	ND	21.5	20.0	ND ND	NS.	21020.3 NS	20000.0	ND :	NS	NA .	NA	ND	NA.	NA .	NA	NA	NA.	20.0	3333							
cyclohoune	NIC	ND	NS		ND	21961.9	22624.3	20000.0	ND	113.0	85.0	126.0	ND	109.8	113.1	60.0	140.0	3.0	20.0	1,200,000	1				1		
1,1-dichloropropene	5.0	ND	22.6	20.0	CONTRACTOR IN CONTRACTOR IN CONTRACTOR IN CONTRACTOR IN CONTRACTOR IN CONTRACTOR IN CONTRACTOR IN CONTRACTOR I	19686.1	20489.6	200000	ND	102.2	73.0	129.0	ND	98.4	102.4	70.0	1400	40	20,0	***							
oution tetradiondo	5.0	ND.	20.4	20.0	ND ND	22126.1	22595.3	20000.0	ND	113.9	76.0	123.0	ND	110.6	113.0	49.0	155.0	2.1	20.0	1				1	i		
1,2-dichloroethane	5.0	ND	22.8	20.0 20.0	WND ∷	192228	22393.3 19571.7	20000.0	ND	91.7	86.0	1180	ND.	96.1	97.9	37.0	151.0	8	20.0						i i i i i i i i i i i i i i i i i i i		
benzene	5.0	ND	19.5	20.0	ND	21229.0	21927.9	20000.0	ND	110.1	82.0	120.0	ND	106.1	109.6	71.0	157.0	3.2	20.0						1		
trichloroethene	5.0	ND	22.0	anan kata ka ka ka ka ka ka ka ka ka ka ka ka ka	and a substitution of the	18544.6	18859.4	20000.0	ND	949	74.0	126.0	MD.	92.7	94.3	D	210.0	17	20.0								
1,2-dichlompropane	5.0	ND:	190	20.0 20.0	ND ND	20610.9	20809.l	20000.0	ND	105.1	74.0	126.0	ND	103.1	104.0	35.0	155.0	1.0	20.0	1					1		
bromodichloromethane	5.0	ND	21.0	20.0 20.0		217313	22031.0	20000.0	ND.	1113	78.0	1250	MD	108.7	110.2	60.0	140.0	14	20.0						88		
disononduse	5.0	ND	223		ND	16765.1	17225.8	20000.0	ND	85.2	68.0	144.0	ND	83.8	86.1	70.0	130.0	2.7	20.0								
2-chloroethylvinyl-ether	10.0	ND	17.0	20.0	and the second	171657	179193	20000.0	ND.	84.6	79.0	127.0	מא	85.8	89.6	70.0	1300	43	20.0					 	Æ		
4-meftyl-2-pentanone	10.0	ND	169	20.0 20.0	ND ND	18846.0	19218.5	20000.0	ND	97.1	77.0	123.0	ND	94.2	96.1	D	227.0	2.0	20.0	1				l	ı		
cis-1,3-dichloropropene	5.0	ΝD	19.4		₩D	10040.U	NS	20000.0	ND	NS	NA .	NA	ND	NS	NS	NA	NA	NA.	20.0	1					Ø#		
dimethyl dimifide	NTC	ND	NS	20.0		19147.I	19369.7	20000.0	ND	97.6	83.0	119.0	ND	95.7	96.8	47.0	150,0	1.2	20.0	*****					1		
toluene	5.0	ND	19.5	20.0	ND	19147.1 NS	000000000000000	20000.0	ND	NS.	NA.	NA	MD.	ŃS	NS	NA	NA	NA	20.0			83					
etnyi methacrytate	NIC	ND	NS	20.0	ND ND	17490.6	17755.7	20000.0	ND	90.0	74.0	124.0	ND	87.5	88.8	17.0	183.0	1.5	20.0	T****			''''		i		
trans-1,3-dichlotopropent	5.0	ND	18.0	20.0 20.0	UN MD	17490.6	17733.7 19704.0	20000.0	NID N	100.2	72.0	1190	ND.	973	98.5	32.0	150.0	12	20.0	2000		***					
I,1,2-trichlomethane	5.0	ND	20.0	ZU.0	.∵	- X- 29 4	TAWAR	- puntit	0000 <u>91</u> 0000	1.504		CATE OF THE	200	Contraction											_		

Kennron Environmental Services -OVL Volatile Quality Centrol Summary

Werkgroup #: wg649967 Method: 8260B Matrix: WATER Units: ug/L Run Dete: 12/3/98 Instrument ID: HPMS 8 BLK FLNM: 8_5564.D LCS FLNM: 8_5565.D SMPL Num: 11-380-23 SMPL FLNM: 8_5567.D MS FLNM: 8_5569.D MSD FLNM: 8_5570.D LCS DF: SMPL DF: MS DF: MSD DF:

1000 1000 1000

			CON	CENTRA	TION, PPI	3				مرسنم 			PERCE	NT RECO	VERY			PERC	ENT RPI) 0	UTLIE	RS			
	RDL	BLK	LCS	LCS Spike	SMPL	MS	MSD	MS Spike Level	BLK	ıcs	LCS LCL	LCS UCL	SMPL	MS_	MSD	MS LCL	MSD UCL	MS RPD	RPD UCL	Blank	ន្ទ	Semple	MS	WSD	SPD.
Target Analytes	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	10g/L	ug/L	%	%	%	%	%	%	%	%	*	*	%		1 2275-22	2000000	1000007	22220	00000
2-hexamone	10.0	שא	15.7	20.0	ND	16053.0	16681.9	70000.0	ND	78.7	55.0	1140	ND	803	83.4	70.0	130.0	3.8	20.0		384350	88.86	10000	10000	
(3-dichloropropens	5.0	ND	19.0	20.0	ND	18431.4	18765.4	20000.0	ND	94.9	73.0	122.0	ND	92.2	93.8	60.0	140.0 148.0	1.8 19	20.0 20.0	00001	90000	38888	10000	360334	3366
tetrachloroethene	5.0	ND	20.8	20.0	ND	20206.D	20596.8	20000.0	ND	104.2	82.0	120.0	ND	1010	103.0 97.4	54.0 53.0	149.0	1.2	20.0	10000	39300	0886	0.000	200000	23333
dibromochloromethane	5.0	ND	19.9	20.0	ND	19239.2	19473,0	20000.0	ND	99.6	72.0	121.0 121.0	ND ND	96.2 99.0	100.6	60.0°	140 0	16	20.0	20000	9886	33383	188888	20000	90.8
1,2-dibromoethune	5.0	ND	20.2	20.0	ND	19795.0	20119,1	20000.0	ND	101.2	75.0 NA	NA	ND	NS	NS	NA	NA	NA	20.0	\$20000	3666596	1000140	1 0000000	20(030)	5555000
1-chlorohexane	NTC	ND	NS	20.0	ND	NS	NS Sections	20000.0	ND	NS 1042	83.0	120.0	ND.	(01.5	1024	37.0	160.0	0.9	20.0	- CONTRACTOR OF THE PARTY OF TH		388		***	388
chlorobenzene	50	МĎ	20.8	20.0	ND.	20294.7	20477.7 19730.2	20000.0 20000.0	ND CW	102.8	79.0	118.0	ND	98.0	98.7	60.0	40.0	0.6	20.0	JANA S					12,50,74
1,1,1,2-tetrachloroethans	5.0	ND	20.6 20.7	20.0	ND ND	19602.6 20089.0	20323.3	20000.0	ND	103.5	820	1190	· ND	1004	101.6	37.G	162.0	12	20.0			<i>60.</i> 46			800
elhylbenzane	5.0	ND	**********	20.0 40.0	ND	39418.2	39964 4	40000.0	ND	102.6	81.0	121.0	ND	98.5	99.9	60.0	140.0	1.4	20.0		1		I		
m+p-xylene	5.0 3.0	ND ND	41.0 20.5	20.0	NĎ∷	19690.3	19900.Q	20000.0	ND	102.7	81.0	199.0	ND	98.5	99.5	60.0	140,0		20.0			38.0			
o-xylene	• 5.0	ND	20.1	20.0	ND	19643.5	19786.3	20000.0	ND	100.7	81.0	118.0	ND	98.2	98.9	60.0	140.0	0.7	20.0]		I		
styrene bromotom	30	ND	18.5	20.0 20.0	SND ⊗	182102	18354.8	20000.0	ND	92.5	68.0	129.0	ND	91.1	91.8	45.0	169.0	8.0	20.0			386			
gopropylbenzene	5.0	ND	20.3	20.0	ND	19685.5	19946.4	20000.0	ND	101.5	81.0	121.0	ND	98.4	99.7	60.0	140.0	1.3	20.0		2000000	0000000	0000000	2000000	000000
1.1.2.2-tetrachiorosthans	30	ND	20.5	20.0	ND	20390:0	20633.6	20000.0	NED	102.4	61.0	137.0	ND	101.9	103.2	45.0	157.0	1.2	20.0						98.8
1.2.3-trichloropropane	5.0	ND	20.5	20.0	ND	20380.6	21026.1	20000.0	ND	102.7	72.0	130.0	ND	101.9	105.1	60.0	[40.0	3.1	20.0	000000	000000	coorde	9390908	000000	HKU-139
ma-) 4 diction-2 buten	NTC	ND	12	20.0	NO	1310.0	1270.1	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA.	NA.	20.0 20.0	30000		936633	28333	330 333	35533
propyl-benzene	5.0	ND	20.0	20.0	ND	19675.2	19751.3	20000.0	ND	100.0	69.0	135.0	ND	98.4	98.8 *********	60.0	140.0	0.4	20.0	*****	283833	33333	233333	1000000	8838E
bromobenzene	5,0	ND	20.9	20.0	ND	20561.0	20837.8	20000.0	ND	104.7	86.0	1180	ND	102.8	104.2	60.0	140 D	13	CAST CONTRACT	000000		300000	10000	938.8	0.8800/80
1.3.5-trimethylbenzene	5.0	ND	19.7	20.0	ND	19435.2	19502.1	20000.0	ND	98.5	83.0	121.0	МD	97.2	97.5	60.0	140.0	0.3	20.0	100000		.00000	300000	100000	3000
2-chiorotolnene	5.0	ND	193	20.0	ND	19496.3	20004.9	20000.0	ND	96.7	80.0	126.0	מא	97.5	100.0	60.0	140.0	2.6	20.0		1000	220	38388	10000	3883
4-chlorotoluene	5.0	ND	20.3	20.0	ND	19390.3	19103.0	20000.0	ND	101.6	80.0	125.0	ND	97.0	95.5	60.0	140.0	1.5	20.0]	l			l
alpha-methyl-styrene	NTC	ND	NS	20.0	ND	NS	NS	20000.0	ND	NS	NA	NA	ND	NS	NS	NA	NA	NA	20.0	l		550505	000000	- 2000/2000	.000391
tert-bulyi-benzene	50	ND	20.1	20.0	ND	19734.3	19989.4	20000.0	ND	100.6	79.0	1140	ND	98.7	99.9	60.0	140.0	13	20.0						
\$15000000000000000000000000000000000000	Appropriate Comments	ND	20.L	20.0	ND	19502.l	19602.5	20000.0	ND	100.4	84.0	121.0	ND	97.5	98.0	60.0	140.0	0.5	20.0				[2225
1,2,4-trimethylbenzena	5,0	000010000	4446466666	800/1000000000	accoómbococa	19213.3	19437.0	20000.0	ND	98.5	81.0	122.0	ND	961	97.2	60,0	140,0	12	20 0	1					
seo-butyl-benzana	5.0	MD	19.7	20.0	ND ND	18778.4	18854.7	20000.0	ND	96.5	80.0	119.0	ND	93.9	94.3	60.0	140.0	0.4	20.0		l	ł	1		l
p-isopropyl-tobiene	5,0	ND	19.3	20.0	2000000000000	Securior (SNA)	20373.7	20000.0	MD	1040	85.0	119.0	ND	100.7	101.5	60.0	140.D	12	20.0						
1.3-dichlorobenzene	5.0	ND	20.8	20.0	ND	20137.5		80000000000000	00002000000	103.5	82.0	122.0	ND	101.1	102.l	18.0	190.0	1.0	20.0	1	1		I		
1,4-dichlorobenzene	5,0	NĎ	20.7	20.0	ND	20223.4	20426.3	20000.0	ND	2000000000000	1000000000	40000000000	ND.	94.3	942	60.0	140.0	Q.i	20.0						
n-butyl-benzene	5.0	ND	19.5	20.0	ND .	18860.0	18832.9	20000.0	₩ D	97.3	80.0	125.0	ND	(03.6	103.1	19.0	190.0	0.5	20.0	2	T				
1,2-dichlorobenzene	5.0	ND	21.1	20.0	ND	20720.8	20613.2	20000.0	ИD	105.6	86.0	119.0	acoustain ann a	and an artist of the control of the	96.4	60.0	£40.0	0.7	20.0		18888	388	1		
2-dibermo-1-chieropeoper	5.0	ND	178	20.0	ND	17956.0	180748	20000.0	ND	89.2	66.0	1340	ND	89.8	a carriera	30,000,000,000	140.0	0.3	20.0	220000	10000	26,033	200000	10000004	000000
1,2,4-trichlorobenzene	5.0	ND	20.2	20.0	ND	19694.1	19642.9	20000.0	ND	100.8	78.0	122.0	ND	98.5	98.2	60.0	000000000000000000000000000000000000000	199000000000	999969999999	1000	1000	93339	1888	3333	****
hexachlorobutadane	5.0	ND	18.6	20.0	ND	18026.1	18484.7	20000.0	ND	929	730	125.0	ND	90.1	92,4	50.0	140.0	2.5	20.0	100000	(88000)	333333	83336	000000	98888
napthalene	10.0	ND	20.2	20.0	ND	19693.8	19866.3	20000.0	מא	101.2	74.0	148.0	ND	98.5	99.3	60.0	140.0	0.9	20.0		12000000	10000000	225500	900000	288
(23-michlombenzene	50	ND	199	20.0	ND	19574.0	19737.9	20000.0	ND	99.7	74.0	124.0	OM	97.9	98.7	60.0	140.0	0.8	20.0	100000	1388		18.00	8000	***
						***************************************														I			<u> </u>	ليبإ	ببا
Surrogates		\$4.0	53.2	50.0	53.B	52.5	52.9	50.0	108.0	106.5	86	118	107.6	105.0	105.7				80000						
dimomofisoromethene			erica area anti-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1900an - 2000an - 200	53.2	53.7	50.0	108.6	107.7	80	120	108.4	106.4	107.4					l			.	J	
1,2-dichloroethane-d4	00000000000000000000000000000000000000	54.3 	53.8	50.0	54.2	anno anno anno an	en anno esta a como esta esta esta esta esta esta esta esta	50.0	04.4	93.6	88	110	93.5	93.9	944										
toluene-d8	3000 N	41.2	46.8	50.0	46.8	46.9		1997. 2000000	2002/22/20	93.6	86	115	93.6	93.9	93.3	v	verensiss	The second second	, and energy	T	1	١ <u>.</u>	<u> </u>		1
p-bromotiuorobenzene		46.2	46.8	50.0	46.8	46.9	46.7	50.0	92.4	93.0	80	113	73.0	73.7	7.5.2					٠		_	-		

Notes and Definitions: RDL-- Reporting Detection Limit BLK-- Method Blank LCS-- Laboratory Control Sample SMPL= Sample Results
MS/MSD= Matrix Spike / Matrix Spike Duplicate
LCL= Lower Control Limit

UCL- Upper Control Limit

RPD= Relative Percent Difference H=Above control limit L=Below control limit

KEMRON ENVIRONMENTAL SERVICES . OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49979

EXT DATE: 12/2/98

RUN DATE: 12/4/98 SMPL ID: L9812029-02 WATER INSTRUMENT : HPMS7 ANALYST: MLS

METHOD: 8270 MATRIX: WATER

BENCH SHEET: V105P93

BLK FLNM: 6490 LCS FLNM: 6489 SMPL FLNM: 6496 MS FLNM: 6496

3497

CONCENTRATION UNITS: UGAL PREP WORK GRP: WG49935

			_
MSD	FLNM	።	6

				CONCER	TRATION .	un /1			Γ			PERCEN	IT RECOVER	₹Y , %					PERCE	π			OND AITS
	201		LCS SPIKE ADDED	LCS	SAMPLE	MS SPIKE ADDED	MS	MSD	BLANK	LCS	LCS LCL	LCS UCL	SAMPLE	MS	MSD	MSLCL	. Misjucil	MSD RPD	RPD UCL	RPO >	SAMPLE	BLANK	ရှိ မွှ
ANALYTE	RDL 5.0	BLANK	100	14,6	ND	200	16.6	27.2	NA.	14.6	5	150	NA	8,3	13.6	5	150	48	40	•	10000	مامحا	2001:200.0169*
PYRIDINE N-NITROSODIMETHYLAMINE	5.0	ND.	100	37.2	ND	200	75.5	73.7	NA .	37.2	5	150	NA	37.8	38.9	5	150	2	40			8334 C	
ANILINE	10.0	ND	100	37.4	ND	200	84.2	79.3	NA.	37.4	5	150	NA	42.1	39.7	5	150	6	40	x110000000000	2223	8888	
ANIUNE PHENOL	5.0	ÖÖ	100	27.1	ND	200	61.8	62.0	NA .	27.1	5	112	NA .	26.9	26.0	5	112	∞0 ∞	40	1000000	3300	988 B	
BIS(2-CHLOROETHYL)ETHER	5.0	ND	100	59.8	ND	200	110.2	110.9	NA	59.8	12	158	NA.	55.1	55.5	12	158	400001000	40	300000000	0820	sask.	201.8344.83
2-CHLOROPHENOL	5.0	ND	100	547	ND	200	100.2	103.5	NA .	54.7	. z	134	NA .	50.1	51.6	23	34	333	40	A (1966 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	400000	assa r a	884 888 4 89
1,3-DICHLOROBENZENE	5.0	ND	100	46.0	ND	200	82.8	69.5	NA.	46.0	5	172	NA.	41.4	44.8	5	172	8	40	0.000.000000000000000000000000000000000	280	999	:: ::::
4-DICHLOROBENZENE	100	NO	100	47.0	ND	200	83.8	90.7	NA.	47.0	20	124	NA .	41.2	45,3	20	124	- 8 - 5	40 40	0.0000000000	2333	assa ja	A. 1000
BENZYL ALCOHOL	5.0	ND	100	51.1	ND	200	103.3	97.9	NA.	51.1	5	150	NA NA	51,7	48.9	5	150	7	40	3534833483	800	0000	sales la
1.2-DICHLOROBENZENE	5.0	ND	. 100	49.0	ND	200	87.0	93.0	NA .	49.0	32	129	NA.	43.5	46.5	32	129	1	4D	10000000	2230	eser pe	.000 (0.00) (0.00
2-METHYLPHENOL	5.0	ND	100	54.7	ND	200	99.1	100.1	NA.	54.7	5	150	NA (1000000000000000000000000000000000000	49.6	50.0	5	150		- 40°		380	88.	88 68 8 8
BIS(2-CHLOROISOPROPYL)ETHER	5.0	ND.	100	55.6	ND	200	105.9	111.1	, W	58.8	25	156	NA.	53.0	55.6	38 5	165 150	3	40	(Economic	53500	200 p.	action appro-
L A 4-METHYLPHENOL	5.0	ND	100	51.8	ND	200	93.2	96.1	NA NA	51.8 	5	150	NA	46.6	48.0	1888288	230		40	lesses.	8.8	86 3 4	
LINITROSO-OLN-PROPYLAMINE	5,0	NO	100	59.2	ND	200	1110	111.8	NA	59.2	5	230	NA.	55.5	55.93 43.3	40	::::::::::::::::::::::::::::::::::::::	8	40	Apoccuooxicos		~~~	
NEXACHLOROETHANE	5.0	ND	100	46.9	ND	200	\$0.2	86.6	NA.	46.9	40	113	NA NA	40.1	56.5	36	180	Ž	40			888 B	
NITROBENZENE	5.0	ND	100	57.5	ND .	200	¥10.3	112.0	NA .	57.5	35 × 35	180	NA	65.2	61.3	21	196	30)000 1 6000	**************************************) 000 V00 V000			
SOPHORONE	5.0	ND	100	64.8	МD	200	123.7	122.5	NA SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	64.8	21	196	NA	61.9	≈ 54.7°	29	182	:::2∷	40	(2000000	1000		**
2-NITROPHENOL	5.0	ND	100	59.7	ND	200	107.6	109.5	NA	59.7	29	182	NA	53.8 58.4	58.0	32	119	*****	40	40000000000			***
4-DIMETHYLPHENOL	5.0	ND	100	63.5	ND	200	116.9	116.1	NA CONTRACTOR	63.5 ::::::::::::::::::::::::::::::::::::	32	119	NA NA	56.4	55.7	33	184		40	1 000000		883	
BIS(2-CHLOROETHOXY)METHANE	25.0	ND	100	69.7	ND	200	110.8	111.4	NA :	69.7	23	184	NA NA	22.6	21.6	5	150	4	40	· Dacenson		~~~	٢
BENZOIC ACID	5.0	ND	100	3.7	ДИ	200	45.2	43.2	NA Secondo Secondo	3.7 **********	5 	150	Construction of the second section of the section of	56.2	52.7	39 ·	135	333	40	1 000000		so k	
2.4-DICHLOROPHENOL	5,0	ND	100	56.2	ND	200	1125	115.4	NA .	86.2	39	135 142	NA NA	45.5	48.8	44	142	3	40	A 000 A 000 A 000 A 000 A			
1,2,4-TRICHLOROBENZENE	5.0	ND	100	50,4	ND	200	91.0	93.6	NA Sections	50.4	44	133	l iù	63.4	54.9	21	193		*0				
NAPHTHALENE	6.0	ND	100	58.6	ND	200	166.8	109.8	NA	58.6 58.8	21 5	**************************************	NA	71.7	58.4	5	150	24	40		l i		
4-CHLOROANILINE	5.0	ND	100	58.8	ND	200	143.4	112.8	NA NA	and the same	24	116	i ka	45.0	47.2	24	115	****	40 ×				
HEXACHLOROBUTADIENE	10.0	ND	100	48.9	ND	200	90.d	94.5	144	48.9	22	::::::::::::::::::::::::::::::::::::::	NA	69.8	82.9	22	147	17	40]			
-CHLORO-3-METHYLPHENOL	5.0	ND	100	90.9	ND	200	139.6	165.7	NA.	90.9	- 5	150	i NA	62.7	52.7	5	150	0	40				
METHYLNAPHTHALENE	5.0	ND	100	67.7	NO	200	105.3	105.6	NA.	67.7	5	150	NA	6.9	8.1	5	150	17	40	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
HEXACHLOROCYCLOPENTADIEN	5.0	ND	100	23,3	ND 	200	13.7	16.3	NA SCONTINGES	23.3	37	::144°	NA.	61.0	≈ 7 <u>0</u> .7≅	37	144	15	40				
LA, B-TRICHLOROPPHENOL	25.D	ND	100	84.2	ND	200	121.9	1113	NA NA	84.2 94.2	5	150	NA	71.6	87.5	5	150	20	40		I	l.	
4,5-TRICHLOROPHENOL	5.0	ND	100	94.2	ND	200	143.3	174.9	I MA	61.0	60	118	NA .	64.0	54.9	80	118	1 2	40				
SCHLORONAPHTHALENE	25.0	NO	100	610	NO	200	108.0	109.9	NA.	92.9	5	150	NA	73.8	84.5	5	150	13	40	1		Ì	
NITROANILINE	5.0	ND	100	92.9	ND	200	147.7	169.0	Accessor and the second	92000001906	3	112	NA.	74.0	80.6	5	112	9	40				
METHYLPHTHALATE	5.0	ND	100	88.0	ND	200	148.0	181,2	NA.	88.0 75.0	33	145	NA	62.6	68.1	33	145	5	40	Τ	I	l	
CENAPHTHYLENE	5.0	ND	100	75.0	ND	200	125.2	132.2	NA .	87.4	80	158	i il	74.5	81.2	50	158	9	40				######################################
6-DINITROTOLUENE	6.0	ND	100	87.4	NO	200	148.0	162.5 160.5	NA NA	89.4	5	150	NA	83.2	80.2	5	150	4	40	1	1		
-NITROANILINE	25.0	ND	100	89.4	ND 	200	166.4	160.5	NA.	73.1	47	145	NA.	60.7	64.1	47	145		40				
NCENAPHTHENE	5.0	NO	100	733	ND	200	121.5	119.1	NA NA	61.6	5	191	NA.	54.2	59.6	5	191	9	40	J			alad.
4-DINITROPHENOL	25.0	ND	100	61.6 ~~~~~	ND	200	108.4	version over	. 5600 950 95000 1	40.5	š	132	NA.	42.0	45.1	- 5	132	1 7	40				
L-NITROPHENOL	25.0	ND	100	40.5	ND	200	83.9	90.1	NA S	78.4	::::::::₩;:::::::::5	150	NA	62.8	68.9	5	150	9	40				
DIBENZOFURAN	5.0	ND	100	78.4	ND	200	125.6	137.9	NA NA	97.4	. 3g	139	NA NA	93.8	97.7	39	139		40		後数		
4-DINITROTOLUENE	5.0	ND	100	97.4	ND	200	187.6	195.3	NA .	95,40	PNU000000000000000000000000000000000000	196							-				

NOTES & DEFINITIONS :

NA = NOT APPLICABLE

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

NS = NOT SPIKED L= below QC limit

H=above QC limit





KEMRON ENVIRONMENTAL SERVICES, OVL SEMI-VOLATILES QUALITY CONTROL SUMMARY

ANAL WORK GRP: WG49979

METHOD: 8270

BENCH SHEET: V105P93

RUN DATE: 12/4/98

INSTRUMENT : HPMST ANALYST: MLS

MATRIX: WATER

BLK FLNM: 6490 LCS FLNM: 6489

EXT DATE: 12/2/98

SMPL 1D: L9812029-02 WATER SMPL FLNM: 10/12/17

MS FLNM: 10/13/17 MSD FLNM: 10/14/17

CONCENTRATION UNITS: UG/L PREP WORK GRP: WG49936

ANALYTE RDL BLA DIETHYLPHTHALATE 5.0 NI FLUCRENE 5.0 NI 4-CHLOROPHENYL-PHENYL ETHE 5.0 NI 4-NITROANILINE 25.0 NI 4-BOINTRO-2-METHYLPHENOL 5.0 NI 4-BOINTRO-2-METHYLPHENOL 5.0 NI 4-BROMOPHENYL-PHENYL ETHE 5.0 NI 4-BROMOPHENYL-PHENYL ETHE 5.0 NI 4-BROMOPHENYL-PHENYL ETHE 5.0 NI PHENACHLOROPHENOL 27.0 NI PHENACHLOROPHENOL 27.0 NI PHENACHLOROPHENOL 27.0 NI BENTACHLOROPHENOL 37.0 NI CARBAZOLE 5.0 NI CARBAZOLE 5.0 NI DI-MBUTYLPHTHALATE 5.0 NI BUTYLBENZYLPHTHALATE 5.0 NI BUTYLBENZYLPHTHALATE 5.0 NI BENZOJAJANTHRAGENE 10.0 NI BENZOJAJANTHRAGENE 10.0 NI BENZOJAJANTHRAGENE 5.0 NI BENZOJATANTHRAGENE LCS SPIKE NIK ADDED D 100	CONCENTRATION LCS SAMPLE 96.4 ND 91.2 ND 88.8 ND 113.7 NO 93.2 ND 105.3 ND 99.1 ND 83.1 ND 83.1 ND 89.2 ND 102.6 ND 1015.1 ND	MS SPIKE ADDED 200 200 200 200 200 200 200 200 200 20	182.1 15 153.5 16 144.6 16 217.3 22 160.8 17 168.6 15 179.8 19 143.2 16 174.2 18 200.2 200.2 20	SD BL ² 0.8 N 9.2 N 1.6 N 3.5 N 5.5 N 1.8 N 6.4 N 6.4 N 6.4 N 6.4 N	A 96.4 A 91.2 A 88.8 B 112.7 A 93.2 A 105.3 A 99.1 A 83.1 A 93.1 A 93.1	5 28 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	LCS UCL 114 158 121 160 150 181 150 127 152	NA 9 NA 7 NA 7 NA 10 NA 8 NA 8 NA 9 NA 8	MS MSD 1.0 95.4 5.7 94.6 2.3 80.8 38.6 111.7 0.4 87.8 4.4 99.5 9.9 85.9 1.6 78.2 7.1 91.1	5 25 59	MS UCL 114 158 121 150 150 181 150 127 152	MSD RPD 5 11 21 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	40 40 40 40 40 40 40 40 40	RPD > LIMIT	SAMPLE		
DIETHYLPHTHALATE 5.0 NI PLUORENE 5.0 NI A-CHLOROPHENYL-PHENYL ETHE 5.0 NI A-NITROANILINE 25.3 ST A-GHLOROPHENYL-PHENYL ETHE 5.0 NI A-BINITRO-2-METHYLPHENOL 25.0 NI A-BINITRO-2-METHYLPHENOL 25.0 NI A-BINITRO-2-METHYLPHENOL 25.0 NI A-BINITRO-2-METHYL-PHENYL ETHES 6.0 NI PHENACHLOROBENZENE 5.0 NI PHENACHLOROPHENOL 25.0 NI PHENATHRENE 5.0 NI PHENATHRENE 5.0 NI CARBAZOLE 5.0 NI CARBAZOLE 5.0 NI PHENATHRENE 5.0 NI PHENATHRENE 5.0 NI BINITROENE 6.0 NI BINITROENE 6.0 NI BINITROENE 6.0 NI BINITROENE 6.0 NI BINITROENE 6.0 NI CHRYS	D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100 D 100	96.4 ND \$1.2 ND 88.8 ND 113.7 NG 93.2 ND 105.3 ND 99.1 ND 83.1 ND 93.1 ND 93.1 ND 93.1 ND 93.1 ND 93.1 ND 93.1 ND 93.1 ND	200 200 200 200 200 200 200 200 200 200	182.1 15 153.5 16 144.6 16 247.3 25 160.8 17 188.6 15 179.8 19 143.2 16 174.2 15 179.1 15 200.2 20	9.2 N 1.6 N 3.5 N 5.5 N 8.9 N 1.6 N 6.4 N 2.3 N 0.2 N 8.7 N	A 91.2 A 85.8 A 112.7 A 93.2 A 105.3 A 99.1 A 83.1 A 93.1 A 89.2	28 59 5 5 5 5 5 6 63 5	158 121 180 150 181 150 127 152	NA 7 NA 7 NA 10 NA 8 NA 9 NA 8	5.7 84.6 2.3 80.8 28.6 111.7 0.4 87.8 4.4 99.5 9.9 95.9 1.6 78.2	25 59 6 5 5 5 5 5	158 121 150 150 181 181 150	10 11 3 9 5	40 40 40 40 40 40 40 40			
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ANTROANLINE 25.3 MT 1,2-DIPHENYLHYDRAZINE 5.0 NI 1,5-DINITIO-2-METHYLPHENOL 25.0 NI 1,6-DINITIO-2-METHYLPHENOL 25.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL ETHES 5.0 NI 1-BROMOPHENYL-PHENYL 5.0 NI 1-BROMOPHENE 5.0 NI 1-BROMOPHENYL-PHENALATE 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BROMOPHEN 5.0 NI 1-BR	0 100 0 100	93.2 ND 105.3 ND 99.1 ND 63.1 ND 93.1 ND 93.1 ND 102.6 ND 101.5 ND	200 200 200 200 200 200 200 200 200	160.8 17 188.6 19 179.8 19 143.2 16 174.2 18 179.1 19 200.2 20	5.5 N 8.9 N 1.8 N 6.4 N 2.3 N 0.2 N 8.7 N	A 93.2 A 105,3 A 99.1 A 83.1 A 93.1 A 89.2	5 5 5 69 5	150 181 150 127 152	NA 8 NA 9 NA 8 NA 7	0.4 67.8 4.4 99.5 9.9 65.9 1.6 78.2	5 5 5 53	150 181 150 127	9 5 6	40 40 40			317383.1383
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SHLOCTYLPHTKALATE 50 NL		111.8 ND	200		2.5 N	erani roan i executad		146		19.6 11.13		145	10000	40			
		103.1 ND	200	(1)(1)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	7.0 N		24	159	*************	3.2 108.5		159	5	40			1
SENZO(B)FLUORANTHENE 5.0 NO	and the second second second	102.3 ND	200	*** ****	5.0 N	de entre entre en rece	11	162		48 1125	11	162	2	40			
BENZOJKIFLUORANTHENE 60 NC	The state of the s	108.7 ND	200	SOCIETATION CONTRACTOR STATE	9.9 N		17	163	0.0000000000000000000000000000000000000	7.9 110.0		163	2	40			1
BENZOJAJPYRENE 5.0 NO		104,3 ND	200		7.5 N	nace and the first		171		18 113.7		171	2	40			
NDENO(1,23-CD)PYRENE 5.0 NO	*************	107.8 ND	200	223.5 22 242.7 24			5	227		1.3 123.6	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	227	2	40			11
DIBENZIA HJANTHRACENE 5.0 NO	Terrania de la constitución de l	116.7 ND	200	e e e e o do o o de o oscarente de c	ด์	Construence of Secretary	·	219	NA 11	44 115.2	6	219	1	40			
SENZOIG, HIPPERYLENE 5.0 NO	D 100 1	109,8 ND	200	228.8 23	M23 2332	Paracological Company	000,00000000000000000000000000000000000	(Alexandra)	AND STREET	2/20/00/20/20/20/20/20/20/20/20/20/20/20							l i
SURROGATES							<u> </u>				 	400					┾╍┿╸
-FLUOROPHENOL 52.	.1 100	39.2 44.0	100	35.2 3	7.7 52	e de marcia de marcialista da Calenda.	21	100	and the second	5.2 37.7	21	100	3636036663336683	::::::::::::::::::::::::::::::::::::::	0.0000000	selse	1000
PHENOL+D6 34	Commence of Commences	26.6 28.4	100		34		10	94	harantana na kataman a sa kataman kataman kataman kataman kataman kataman kataman kataman kataman kataman katam	4.1 25.3	30	94 114	E400808088016881	2000-1000-000	sko et prodekt	333 (336)	10000180001
ITROBENZENE - D5 37.	\$2500 PERSON STATES AND STATES AN	30.2 32.2	50		15 76	*******	35	114 2522233	\$44,000,000,000,000	6.7 59. 0	35		990000000000000000000000000000000000000	S888883	999999	88122	
FLUCROSIPHENY. 41		34.7 33,8	50	313 3	.83	,	43	116	CONTRACTOR CONTRACTOR OF	25 63.6	43 🔆	116 123	(gr)506(66),206660 	0.0000000000000000000000000000000000000	X450040465 h	·····	
4.6-TRIBROMOPHENOL 108	Mark Color State State of the S	114.0 107.1	100	104.9 11	and the second	Address of the Contract of the	10	123	and the contract of the contra	4.9 115.1	10 33	141	100000000000000000000000000000000000000		(185,886)	SS H	lession.
TERPHENYL DIA 71		63.6 66.9	50	65.2 64	,2 142	5 27,1	33	418	131.8 13	0.4 136.4		8 (18.44 (1824)	nesculare specie				

NOTES & DEFINITIONS :

NS = NOT SPIKED

INSTRUMENT: HP9

SAMPLE ID : NA

EXT'N DATE: 12/1/98 EXT'N BENCH SHT: V105P85 ANALYST : ECL RUN DATE : 12/4/98 BLK FLNM: 1522 LCS FLNM: 1523 SMPL FLNM: NA MS FLNM: NA

EXT'N WORK GRP: WG49913 ANAL WORK GRP: WG50057

MSD FLNM : NA

			CONCE	TRATIC	ON, ug	/L			% F	RECOV	/ERY					PERCEN		╬	
COMPOUND	ROL	Blank	ıcs	Sample	MS.	MSD	Blank	LCS		LCS	Sample	MS	MSD	MS LCL	MS UCL	MS/MSD RPD	RPD Adivsory Limits	Blank	LCS Sample MS
							mine						ENERGY		ЯЩ	FIGHS	ĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸ		
ALPHA-BHC	0.05	ND	0.503	1 ND	NA	NA	NA	100.6	37	134	NA	******	******	51	145	NA.	0-43		* .
BAMA DE	0.05	ND:	0.563	I ND	NA:	NA:	NA.	∴112. 6 :	32	127	. NA		######	54	134	NA .	0-18		.:;; . €:
BETA-BHC	0.05	ND	0.575	I ND	NA	NA	NA.	115.0	17	147	NA	*****	*****	51	129	NA	0-28	1	*
HEPTACHLOR	0.05	NO:	0.555	ı: Nb:	N/A	NA.	∵ NA ∵	1110	34	111	: NÁ	******	***	40	139	∵NA∵∵	∴ 6 -37		:::::: :
DELTA-RHC	0.05	ND	0.623	I ND	NA	NA	NA.	124.6	19	140	NA	******	******	56	138	NA .	0-78		
ALDRIN	0.03	NE	0.530	(ND:	NA.	NA.	NA .	1.05.0	42	122	NA.	(#)\ P ###	******	28.	: (43	.∵NA∷∷	0.88		
HEPTACHLOR EPOXIDE	0.05	ND	0.572	I ND	NA	NA.	NA.	114.4	37	142	NA	******	******	51	135	NA.	0-40		
GAMMA-CHÍLORDANE	0.05	NO:	NA.	i ND	NA	ŅĄ.	NA.	NA.	45	119	NA.	ŅA:	ŅA	45	115	ΝÀ	Q-10		
ALPHA-CHLORDANE	0.05	ND	NA	I ND	NA	NA.	ŅĄ	NA	54	119	NA	, ŅA	NA.	45	115	NA .	0-17		وروزو وروزو
ENDOSULFAN (0.05	:NO:	0.092	i∵ND∵	· NA	·NA	::NA	∵7B.4∵	45	:153	::NA::		********	:37∵	123	: NA :	0-22		
4,4-DDE	0.10	ND	0.566	I ND	NA	NA	NA.	113.2	30	145	NA	*****	*****	64	152	NA.	0-23		
DIELDRIN	0:10	NO	0.612	ND:	N/A	NA:	NA .	122.4	36	148	NA.	******	******	23	וֹלִינִי	∴ŅĄ∵	0-20		
ENDRIN	0.10	ND	0.596	I ND	NA.	NA.	, NA	119.2	30	147	NA.	******	*****	56	154	NA .	0-28		#
#.A-EIDID	Q. Q	ND:	0.590	(ND.	NA.	KLA:	. NA	CIB.Q	.ai	:141	NA :	- 489444	******	58	179	. NA	19:30		
ENDOSULFAN II	0.10	ND	0.419	I ND	NA	NA	NA .	83.8	P	202	NA	******	*****	21	117	NA	0-18		· January and Albanda
4.4-DDT	0.10	∶ŅĢ∵	0.584	i ND	ŅΑ	NA:	NA.	116.8	-25	:160	. NA.	***	. pappana	:42	166	ŅĀ	Q-22		30300
ENDRIN ALDEHYDE	0.10	ND	0.426	I ND	NA	NA	NA .	85.2	NA	NA	NA	******	******	21	115	NA .	0-40		
ENEKOSUJLFAN SULFATE	0.10	:ND:	0.425	ND:	NA	NA:	∵ N Í A ∵	:::85;0 ::	26	144	::NA	******	*****	:3€:	117	:: NA :::	··· 0-30		
METHOXYCHLOR	0.50	ND	0.554	l ND	NA.	NA	NA	110.8	NA	NA.	NA.	******	******	26	196	NA.	0-19		₩ LTLTLTLTLTLTLTL
ÉNDRIN KÉTÓNÉ	D. ID.	NO:	0.483	i ND	N/A	ŅĀ	NA :	96.6	ΝÀ	NA.	NA.	: hédanki	****	ŅĀ,	ŅÁ	NA:			
Tech-CHLORDANE	1.00	ND	ŅĄ	ND	NA.	NA.	NA .	NA.	45	119	NA	NA	NA	45	115	NA	0-40		Stanton
TOXAPHENE	₹.00	ND.	:NA:	[∙.NO.:	, FLA	NA.	∴ NA ∴	NA	.41.	:126	∵NÀ:	ŅĀ	NA .	40.	. (25	. NA	D:40		A STATE
SURROGATES																		F	
LAS A TETRACHLORO M-XYLENE	35333	11/12	 :15: 3 1:	i NA	ŇÀ	NA	78.3	75.6	33	154	. NA	NA:	NA .	18:	154				
DECACHLOROBIPHENYL		18.5	21.7	l NA	NA	NA.	92.7	108.4	25	140	NA	NA.	NA.	25	140				

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at 0.5 ug/L

LCS=LABORATORY CONTROL SAMPLE

SURROGATES apliced at 20 ug/L

MS-MATRIX SPIKE

NA - NOT APPLICABLE

MSD=MATRIX SPIKE DUPLICATE

DL = DILUTED OUT

ND = NOT DETECTED

10-20-02-6

RDL=REPORTING DETECTION LIMIT

bereit

KEMRON ENVIRONMENTAL SERVICES MARIETTA, OH

QUALITY CONTROL SUMMARY / 8081 WATERS, REAR

INSTRUMENT: HP9

SAMPLE ID: NA

EXT'N DATE: 12/1/98 EXT'N BENCH SHT: V105P85

ANALYST: ECL RUN DATE: 12/4/98

BLK FLNM: 1522 LCS FLNM: 1523 SMPL FLNM: NA MS FLNM: NA

EXT'N WORK GRP: WG49913 ANAL WORK GRP: WG50057

MSD FLNM: NA

			CONCE	NTRAT	ON, u	yL			% F	RECO	/ERY					PERCENT	···········	 	
COMPOUND	RDL	Blank	LCS	.Sampi		MSD		LCS	LCL		Sample	MS	MSD	MS LCL	MS UCL		RPD Advisory Limists		Sample MS
ALPHA-BHC GAMMA-BHC	0.05 0.05	ND NO		I ND	NA NA	NA ŅA	NA NA	107.4 119.8	37 32	134 127	NA NA		******	51 54	145 134	NA NA	0-43 0-18		
BETA-BHC HEPTACHLDR	0.05	ND ND	0.576 0.579	I ND	NA ∷NA:	NA NA:	NA NA	115.2 - 115.8	17 84:-	147	NA NA	22122	******	51 40	129 (29	NA NA	0-28 : 19-37	10 Hz	
DELTA-BHC ALDRIN	0.05	ND ND	0.655	I ND	NA NA	NA NA	NA NA	131.0 118.8	19 (2	140 122	NA : NA	*******	******	56 26	138 143	NA NA	0-78 0-58		# 21 #1
HEPTACHLOR EPOXIDE	0.05 0.05	ND ND	0.626		NA NA	NA NA	NA NA	125.2 NA	37 45	142 119	NA NA	******** NA	esesses NA	51 45	135 115	NA SNA	0-40 0-40		#
ALPHA-CHLORDANE ENDOSULFAN 1	0.05 0.05	ND NO	NA	I ND	NA NA	NA NA	NA NA	NA 83.6	54 45	119 153	NA NA	NA Herrira	NA #######	45 37	115 123	NA NA	0-17 0-22		
4,4-00E DIECDRIN	0.10	NO ND	0.648	L ND	NA NA	NA NA	NA NA	129.6 135.2	30 36	145	NA NA	******	******	64 23	152 171	NA NA	0-23 D-20		
ENDRIN	0.10	ND ND	0.638	I ND	NA NA	NA NA	NA NA	127.6	30	147	NA NA	******	******	56 58	154 179	NA ∴NA ∵	0-28 0-30		*
4.4-000 Endosulfan II	0.10	ND	0.449	I ND	NA.	NA	NA	89.8	D 25	202	NA NA	******	******	21	117 168	NA NA	0-18 0-22		*
4.4-DDT ENDRIN ALDEHYDE	0.10 0.10	ND	0.483	I ND	NA NA	NA NA	NA	137.0 98.6	NA.	NA	NA	******		21	115	NA NA	0-40 0-30		coro , ,
ENDOSULFAN SULFATE METHOXYCHLOR	0.10 0.10	ND ND	0.501 0.678	I ND	NA NA	NA NA	NA NA	100;2 136	26 NA	NA	NA:	******	******	31 26	117 196	NA	0-19		* #. # ! !*!!
ENDRIN KETONE Tech-CHLORDANE	0.50 1.0	ND ND	0.589 NA	(ND	NA NA	NA NA	NA :	13141 NA	NA 45	NA: 119	∵NA∵ NA	<i>#######</i> NA	NA NA	NA 45	:NA: 115	NA NA	0-40		
TOXAPHEME	1.0	NO:	filk	i NO	ΝÀ	Ńλ	NA.	NA	41	126	NA	NA	NA:	40	125	14A	- 6-40		
SURROGATES															\exists				
ksetetrachloro manjene	3333	17.0	162	į: NA	. NA	N/A	84.9	81.0	1	154	ŅÁ	. ŃA	NA :	l * · · · ·					
SURROGATES 4.5.6-TETRACHLORO # 371,ENE DECACHLOROSIPHENYL		17.0		i na	NA:	NA NA	84.9 107.9	81.0 130.2	13	154	ŅĀ. NA	ÑA NA	NA NA	13		.154 140			

NOTES & DEFINITIONS :

LCS, MS & MSD apitied at 0.5 ug/L LCS=LABORATORY CONTROL SAMPLE

SURROGATES apiked at 20 ug/L

MS=MATRIX SPIKE

NA - NOT APPLICABLE

MSD-MATRIX SPIKE DUPLICATE

DL - DILUTED OUT

ND = NOT DETECTED

RDL=REPORTING DETECTION LIMIT

KEMRON ENVIRONMENTAL SERVICES
MARIETTA, OH
QUALITY CONTROL SUMMARY / PCB WATERS , FRONT

INSTRUMENT: HP10

SMPL ID: 12-007-01

EXT'N DATE: 12/1/98

ANALYST: CDB

SMPL FLNM: 004F0101

EXT'N BENCH SHT: V105P86

RUN DATE: 12/2/98

BLK FLNM: 002F0101 LCS FLNM: 003F0101

LCS Dup FLNM: NA

MS FLNM: 005F0101

EXT'N WORK GRP: WG49914

ANAL WORK GRP: WG49924

MCDE

MSD FLNM : 006F0101

			CONCENT	RATION, U	g/L				% REG	COVE	RY						PERCENT	<u> </u>				
COMPOUND	ROL	Blank	LCS	Sample	MS	MSD	Blank	LCS		CS CL	Sample	MS	MSO	MS LCL	MS UCL	MS/MSD RPD	RPD Advisory Limits	Blank	S) (S)	Sample	SW	OSW
AROCLOR 1016	0.5	ND	3.39	ND	6.74	6.88	NA NA	136	÷	25	NA	135	138	48	125	2.0	NA		Н		Н	
AROCLOR 1221	0.5	ND	NA	ND	NA .	NA.	NA.	NA .	NA I	VA	NA	NA	NA.	NA	NA	NA	NA.					
AROCLOR 1232	0.5	ND	NA	ND	NA	NA	NA NA	NA	NA I	VA.	NA	NA	NA	NA.	NA .	NA	NA	500107011	.49900000	-000000000	-secenteel	9-000/0
AROCLOR 1242	0.5	OND.	NA	ND	NA .	NA NA	NA .	NA.	NA I	MA.	NA .	NA	NA.	NA	NA	NA .	NA NA					
AROCLOR 1248	0.5	ND	NA	ND	NA	NA	NA NA	NA	NA I	NA.	NA	NA	NA	NA	NA	NA	NA	0000000	20001000	1.000000000000000000000000000000000000	2565251360	1000
AROCLOR 1254	1.0	ND	NA	ND	NA .	NA	NA NA	NA .	NA I	NA.	NA	NA	NA	NA	NA	NA	0-40		 			
AROCLOR 1260	1.0	ND	3.30	9.38	15.2	19.4	NA NA	132	59 1	22	NA	117	201	59	122	24.4	NA		(H	035555,656	880385	H
																		*****				100,000
SURROGATES									ļ	_#	_			╂			-1	<u> </u>	г			т
2.4.5.6-TETRACHLORO-M-XYLENE DECACHLOROBIPHENYL		0.159 0.154	0,175 0,224	0.134 0.128	0.348 0.400	0.370 0.372	79.5 77.0	87.5 112		54 40	67.0 64.0	87.0 100	92.5 93.0	13 25	154 140							

NOTES & DEFINITIONS:

LCS, MS & MSD spiked at .25 ug/kg

SUFIROGATES spiked at .0200 ug/kg

NA = NOT APPLICABLE

DL # DILUTED OUT

NO := NOT DETECTED

RDL=REPORTING DETECTION LIMIT

LCS=LABORATORY CONTROL SAMPLE

MS*MATRIX SPIKE

MSD=MATRIX SPIKE DUPLICATE

The state of the state of the state of



"Homogenize ell composite samples prior to analysis

9	4	4	U	4	

Project Contact: esnica Favar **Turn Around Requirements:** Project Name: Redrick town Project No.: NUMBER OF SAMPLES Signature: Sampler (print): **ADDITIONAL** FMP Pest REQUIREMENTS Protocol Grab Sample I.D. No. SW846 CWA Time Date X \propto IEMP BLANK Relinquished by: (Signature) Date Time Received by: Relinquished by: (Signature) Received by: Date Time (Signature) (Signature) Received for Laboratory by: Time Remarks: Relinquished by: Time/ Date Date (Signature)

,	Work Order_	L98120	Client_(jer-mo	#of Sa	imples	Due Date_	12/15	Page(_	
Sample #	Analyses	Reason	Removed By	Removed	MovedTo	Reliq.	Ret'd by	Ret'd	Rec'd	Reason
			ADT	From		By	ADT	То	Ву	
5-10	T55	Anal	DLN12101198	Walkin	Wet	pla	0LN 12/2/98	Archive	29	Archive
01-04	PCB PEST	F+t	12/0/98/01/07	WALKEN		610	जार्भावितकारण		Øg	Dispersion
01-04	BNA	Ext	12/62/98 (2/3/0	MAUKEN	ELAS	619	Simu Hos 18720820	amortin	13	Diaposal
01,03,04	8200	analips	Q413/3/42 D1240	U-1	UDA	XXIA	AM 12/10/9x 2 1245	archive	V319	achir
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					<u> </u>					
										
							-			
									<u> </u>	

Respondi lecural lesmont



APPENDIX C

Pedricktown North Confined Disposal Facility High Resolution Polychlorinated Biphenyls Laboratory Results



Analysis of Water Samples for Mono-ortho, Di-ortho and Coplanar Congener-Specified PCBs

Final Report

For Versar

Midwest Research Institute

425 Volker Boulevard Kansas City, Missouri 64110-2299 (816) 753-7600 MRI Project No. 5356

February 26, 1999

solutions through science and technology



Analysis of Water Samples for Mono-ortho, Di-ortho and Coplanar Congener-Specific PCBs

Final Report

For Versar 9200 Rumsey Road Columbia, Maryland 21045

Attn: Jessica Schulman Farrar

MRI Project No. 5356

February 26, 1999

Preface

This final report provides the results of the analysis of 24 water samples from the Pedricktown, New Jersey site in support of a Philadelphia Corps of Engineers study to determine trace levels of congener-specific polychlorinated biphenyls (PCBs) from dredging operations. The samples were collected by Versar, Inc., to investigate trace levels of these contaminants in the dredge site influent, dredge site weir discharge, and the dispersion area. Background samples also were analyzed.

The samples were prepared for analysis by Mr. Jamie Fox. The HRGC/LRMS analyses for mono-ortho and di-ortho congener-specific PCBs were performed by Mr. Mike Molloy, and the HRGC/HRMS coplanar PCB analyses were performed by Mr. Mark Davis. Ms. Kathy Boggess reviewed the analytical data and prepared this report.

MIDWEST RESEARCH INSTITUTE

Kathy E. Boggess Principal Chemist

Approved:

Thomas M. Sack, Ph.D.

gh D. With

Director

Chemical Sciences Division

February 26, 1999

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Section 1. Introduction

Midwest Research Institute (MRI) was contracted by Versar, Inc., to provide congener specific and total PCB analysis of 24 water samples collected from dredging operations at the Pedricktown, New Jersey site. These environmental water samples were submitted to MRI for analysis in support of Versar's contract with the Philadelphia Corps of Engineers. Samples were designated with unique sample codes and the specific prefixes of these codes were used to identify specific sampling locations. Sample codes with an "inlet" prefix were collected from the dredge site influent and sample codes with a "weir" prefix were collected from the dredge site weir discharge. Samples codes containing "mix" designated samples from the dispersion area and samples with a "BG" code were described as background samples.

The technical approach and scope of work for the study were presented to Versar, Inc., in MRI Proposal 0918-158R, dated October 16, 1998. The scope of work included high resolution gas chromatography/low resolution mass spectrometry (LRMS) analysis for 71 selected mono-ortho and di-ortho PCB congeners. Total PCB concentrations were determined based on the sum of congeners detected for mono through deca PCB homologs.

In addition to the HRGC/LRMS analyses, the samples were analyzed for the four non-ortho coplanar PCBs using high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS) to achieve (pg/L) detection limits. Because coplanar PCBs are typically detected at significantly lower concentrations than the more prevalent mono-ortho and di-ortho PCBs, the coplanar PCB analysis required a separate cleanup and analysis procedure including high resolution mass spectrometry (HRMS) analysis. The HRGC/HRMS analytical method used by MRI was developed through previous studies as a modification of EPA SW-846 Method 8290 and Draft method 1668 to allow simultaneous analysis of the coplanar PCBs with polychlorinated dioxins and furans. In this study, only the coplanar PCBs are reported.

This report describes the methods used to prepare and analyze aqueous samples. Section 2, entitled Experimental Approach, discusses receipt of the samples by MRI, sample code assignments, analytical standards, sample preparation procedures, HRGC/LRMS analysis, HRGC/HRMS analysis, and data reduction.

Section 3, Results, presents sample results and internal quality control results. Quality control results include instrument calibration, method blanks, control spikes, and the percent recoveries for the carbon-13 internal quantitation standards and surrogate standards.

Section 2. Experimental Approach

This section describes sample receipt, analytical standards, sample preparation procedures, instrumental analysis, and data reduction.

2.1 Sample Receipt

The sample collection, study design, and shipment of samples to MRI were coordinated by Ms Jessica Schulman Farrar, Versar. The samples were received in three separate shipments on October 23, November 4, and December 1, 1998. The samples were received cold and in good condition with the exception of a cracked lid noted for Sample Weir 1102. The cracked lid was not believed to compromise the sample integrity. Samples were refrigerated at 4°C until sample preparation was initiated.

MRI's sample receipt documentation, including a sample receipt checklist and sample transaction logs generated by Mr. Mike Cheramy, MRI Sample Custodian, are provided in Appendix A. Sample description on the chain-of-custody forms were compared to the sample container labels. Three discrepancies were resolved with Ms. Farrer on December 8 via e-mail correspondence. The first issue was the sample listed as EB112578 on the chain-of-custody form. This sample was labeled as EB112598 on the sample container. Ms. Farrar advised MRI that EB112598 is the correct field sample code. The second discrepancy was with regard to the spelling of the sample code prefix "weir." The codes were spelled as "wier" on the sample bottles. MRI was advised that weir is the correct code. The third discrepancy was the crossed off sample code MIX1119 on the chain-of-custody form for the sample set received on December 1. Two coolers were received with this shipment and the sample identified as MIX1119 was intended to be listed in the second cooler. MRI was advised to proceed with analysis of this sample.

The samples were identified by their field number and assigned a unique MRI barcode number for identification during sample preparation and analysis. Both the field number and unique MRI bar code are used to report sample results.

2.2 Analytical Standards

Analytical standards were prepared for each of the target analytes shown in Tables 1 and 2. Individual stock solutions of each analyte were purchased from Cambridge Isotope Laboratories, Woburn, Massachusetts and Ultra Scientific, Hope, Rhode Island.

Isotopically labeled analogs of representative PCB congeners were used as internal quantitation standards, surrogates, and internal standards. The analytical standards

discussed in this section are presented as those used for HRMS analysis or those used for LRMS analysis.

2.2.1 Coplanar PCB Analytical Standards (HRMS)

The coplanar PCB standards include native standards for quantitation of two tetracoplanar PCBs (Congeners 77 and 81), one penta-PCB (Congener 126), and one hexa-PCB (Congener 169). Corresponding ¹³C₁₂-isotopes for each congener include ¹³C₁₂-3,3',4,4'tetra-PCB (Congener 77), ¹³C₁₂-3,4,4',5 tetra-PCB (Congener 81), ¹³C₁₂-3,3'4,4',5 CB (Congener 126), and ¹³C₁₂-3,3'4,4',5,5'hexa-PCB (Congener 169). Native spiking solutions, surrogate spiking solutions, and instrument calibration solutions were prepared from mixed stock solutions. The calibration standards include native PCBs over a concentration range from 5.0 to 500 pg/μL with the concentration of isotopes constant at 100 pg/μL as shown in Table 3. The ¹³C₁₂-1,2,3,4 TCDD shown in Table 3 is used as a recovery standard.

2.2.2 Congener-Specific PCB Standards (LRMS)

Aliquots of the individual stock solutions of native PCBs (Table 2) were combined to prepare a mixed stock spiking solution. A mixed surrogate spiking solution was prepared by combining aliquots of the individual 13 C-PCBs stock standard solutions. The 13 C-PCB surrogates included representative congeners from the mono-, tri, tetra-, hexa-, octa-, and deca-PCB homologs. Aliquots of the native PCB congeners shown in Table 2, surrogate spiking solutions, and an internal standard solution containing d_6 -tetra PCB were combined to prepare instrument calibration standards over the concentration range shown in Table 4.

2.3 Sample Preparation Procedures

The analytical procedures used for extraction of the samples have been extensively evaluated at MRI through previous studies, including the study conducted by MRI as Project 4615, January 3, 1997, for the Philadelphia to the Sea Navigation Channel study and the subsequent study for the Chesapeake and Delaware Canal, MRI Project 4865, February 26, 1998. The procedures used for sample preparation were based on EPA Method 8290 and were consistent with EPA SW-846 Methods 3510 C and 3540 C specific to separatory funnel and Soxhlet extractions. The cleanup procedures used were modifications of procedures specified in EPA Method 8290 that MRI has used routinely for PCB analysis as well as for dioxins and furans.

After extraction, the samples were put through a sulfuric acid partitioning cleanup followed by acid/neutral silica gel chromatography cleanup described in Method 8290. Then the extracts were split into two equal portions. The coplanar PCB split was

processed through additional chromatography cleanup procedures including neutral alumina and AX-21 carbon.

2.3.1 Percent Solids Determination

The four samples with an "inlet" prefix were described by the MRI analyst as having a high solid content. The routine separatory funnel extraction procedures used for liquid-liquid extraction could not be applied to these samples. A total percent solids determination was conducted for each of the samples. For the inlet samples, the sample was homogenized and a representative slurry sample was removed for the percent solids determination. A 5-mL aliquot was removed from the sample container and the weight was determined to the nearest 0.0001 g. The sample was placed in a 110°C drying oven and dried to constant weight. The weight of the dried reside was compared to the weight of the 5 mL aliquot and the percent total solids was calculated. The percent solids for the inlet samples ranged from 4% to 6%. The percent solids results for the remaining samples were < 1%.

The suspended solids in the inlet samples were such that a liquid-liquid separatory funnel extraction was not feasible. Therefore, these samples were split into liquid and solid phases for extraction. The aqueous portion was extracted by separatory funnel and the solid portion was Soxhlet extracted. The two extracts were then combined for sample cleanup. The ratio of solids to liquids in the original sample was then used in the final calculations to report concentrations based on the proportions of a liquid/solid slurry mixture. For example, a sample that contained 6% solids was theoretically comprised of 60 g solids and 940 mL water.

After extraction, the samples were put through a sulfuric acid partitioning cleanup procedure followed by an acid/neutral silica gel chromatography cleanup described in EPA Method 8290. At this point, the extracts were split into two equal portions. One portion was analyzed for mono and di-ortho PCBs using high resolution mass spectrometry/low resolution mass spectrometry (HRGC/LRMS). The other half of the extract split that was designated for coplanar PCBs was put through additional cleanup procedures including neutral alumina and AX-21 carbon chromatography described in EPA Method 8290. The extract from this split was analyzed by high resolution mass spectrometry/high resolution mass spectrometry (HRGC/HRMS).

Specific applications of the procedures used for the inlet and the other aqueous samples are discussed in the following sections of this report.

2.3.2 Mono-ortho and Di-ortho PCBs (HRGC/LRMS)

The water samples were prepared for HRGC/LRMS PCB analysis using separatory funnel extractions with methylene chloride and the solid phase of the four inlet samples were prepared using Soxhlet extraction equipped with a Dean Stark with toluene as the

extraction solvent. The 24 water samples were prepared in two batches and the solid phases of the four inlet samples were prepared in a separate batch. Quality control samples prepared with each batch included a method blank, and duplicate laboratory control spiked samples. The matrices were Milli-Q® water and Quartz sand for the spiked QC samples.

The sample size was 1-liter for the aqueous samples and 10g on a dry weight basis for the inlet sediments. The field samples and quality control samples were fortified with ¹³C surrogate standards shown in Table 5. In addition to the ¹³C₁₂ surrogate standards, the laboratory control spikes and duplicate matrix spike samples were spiked with native target analytes. The samples were also spiked with the ¹³C₁₂- coplanar PCB internal quantitation standards for simultaneous extraction for subsequent HRGC/HRMS analysis.

The aqueous samples (1-liter) were extracted with three 60 mL portions methylene chloride. The sediment phase of each inlet sample was placed in a Soxhlet extractor and extracted for at least 16 hr with toluene. The extracts from both types of extractions were filtered through a bed of sodium sulfate, and solvent exchanged to hexane. The hexane extract (~15 mL) was subjected to sulfuric acid partitioning. The recovered hexane extract was then put through a sulfuric acid modified silica gel/neutral silica gel chromatography cleanup procedure.

After cleanup was completed, each hexane sample extract was concentrated to 10 mL and split into two 5-mL portions. One split was set aside for additional cleanup for HRMS analysis (Section 2.3.3). The other 5-mL split for mono- through decacongener-specific PCB analysis was concentrated to 1.0 mL hexane, and an internal standard solution containing d_6 tetra-PCB was added to a final concentration of 200 ng/mL. The extracts were stored at 4°C in the refrigerator until ready for HRGC/LRMS analysis.

2.3.3 Coplanar PCBs (HRGC/HRMS)

The samples for HRGC/HRMS analysis required the same extraction procedures as used for HRGC/LRMS analysis, but clean-up steps were more extensive. The samples were extracted using the procedures discussed in Section 2.3.2.

After extraction, the samples for coplanar PCB analyses were subjected to the same sulfuric acid partitioning and neutral/acid silica gel chromatography column cleanup as described for the mono ortho and di-ortho PCBs. Then, the extracts were split into two equal 5-mL portions. The 5-mL portion designated for coplanar PCB analysis was put through additional column chromatography cleanup steps including neutral alumina and AX21-carbon/Celite, as specified in Method 8290.

Following the final cleanup, the extracts were concentrated under prepurified nitrogen to 100 μ L, and 10 μ L of a recovery standard solution containing $^{13}C_{12}$ -1,2,3,4-TCDD and $^{13}C_{12}$ -1,2,3,7,8,9-HxCDD in tridecane was added. The evaporation was

continued until a volume of 10 μ L was reached. The recovery standard was used to calculate absolute recoveries of the IQS standards. Sample extracts were transferred to refrigerated storage (4°C) until ready for HRGC/HRMS analysis.

2.4 HRGC/LRMS Analysis—Mono-ortho and Di-ortho PCBs

The HRGC/LRMS analyses for 71 congener-specific PCBs were performed using a Fisons MD 800-E quadrupole mass spectrometer operated in the full scan mode with the operating parameters given in Table 7. The instrument was tuned according to manufacturer's specifications, and decafluorotriphenyl phosphate (DFTPP) was analyzed at the beginning of each 12-hr day that samples were analyzed to ensure proper mass assignments. A PCB window defining mix, containing the first and last eluting congeners for each homolog group, was analyzed to determine appropriate quantitation windows for total PCB analysis.

Initial calibration of the instrument was performed with the analytical standards described in Section 2.2 over a minimum of five points. Continuing calibration included a beginning-of-the-day and end-of-the-day standard to ensure stable instrument performance. Calibration criteria included an average response factor precision of less than 20% relative standard deviation (RSD) for the initial curve. Daily calibration response factors were required to be within \pm 25% of the mean RRF from the initial curve. Initial and continuing calibration standards met the performance criteria.

2.5 HRGC/HRMS Analysis—Coplanar PCBs

The coplanar PCBs are typically detected at concentrations much lower than the more prevalent mono- and di-ortho-substituted PCBs. Because of these differences in concentrations, it was necessary to conduct the analysis for coplanar PCBs separate from the other PCB analysis. The analysis for coplanar PCBs was performed using modifications of Method 8290 with analytical conditions established at MRI through previous studies. A VG70 250 S HRMS instrument operated with mass resolution > 10,000 was used for the analyses with the operating conditions shown in Table 8.

The instrument was tuned according to manufacturer's specifications, and a mass resolution check was performed at the beginning of each 12-hr day that samples were analyzed. Initial calibration of the instrument was performed with the analytical standards described in Section 2.2 over a minimum of five points. Continuing calibration included a beginning-of-the-day standard followed by a tridecane blank to ensure no carryover in the analytical system. An end-of-the-day standard was analyzed to ensure stable instrument performance. Calibration criteria included an average response factor precision of less than 20% RSD for the initial curve. Daily calibration response factors were required to be within \pm 20% of the mean RRF from the initial curve for native isomers and \pm 25% for internal quantitation standards. The initial and continuing calibration criteria were met.

2.6 Congener-Specific PCB LRMS Data Reduction

The data from the congener-specific PCB and total PCB analyses were reduced using Lab Base software to calculate the concentration for analyte responses in the appropriate mass windows having ion abundance ratios within ± 20% of the theoretical ratios. The PCB quantitation and theoretical ion abundance ratio criteria are specified in EPA Method 680.

For qualitative identification, detected peaks were required to meet the ion ratio criteria and to fall within ± 0.5 min of the established retention time windows from analysis of daily calibration standards. The order of elution for congener-specific PCBs has been determined during previous MRI studies and from the literature.

For peaks positively identified as congener-specific PCBs, the computer program calculates an extract concentration; then the sample weights, extract volumes, and dilution factors are taken into account to arrive at a final sample concentration.

The calculation formulas are shown in the following equations:

relative response factor = RRF =
$$\frac{\text{Areastd} \times \text{Concis}}{\text{Concstd} \times \text{Areass}}$$
 Eq. (1)

where: area = sum of the area for the primary and secondary masses characteristic of the analyte standard or internal standard, and conc = the concentration (ng/mL) of internal standard or standard.

$$ng/L Sample = \left(\frac{Areasample \times Concis}{Areas \times RRF}\right) \times \frac{v_e}{v_s} \times SF$$
 Eq. (2)

where: v_e = final volume of extract (mL),

 v_s = is volume of sample extracted (liters), and

SF = split factor = 2.

Total homolog PCB results were determined in addition to the congener-specific data. Quantitation windows for the mono- through deca-PCB homologs were established from the analysis of a window-defining standard that contains the first and last eluting congener for each homolog. As a result of the extensive target congener analyte list, all responses observed were identified as specific congeners. For each homolog group, the individual congeners detected above the lowest calibration standard were summed. Total PCBs were calculated by summing the mono through deca homolog concentrations.

¹ Erickson, M. D., Analytical Chemistry of PCBs, Lewis Publishers, Inc. (1992).

Limits of detection for analytes not positively identified were based on the lowest calibration standard (12.5 ng/mL). The estimated maximum possible concentration (EMPC) was calculated for background interferences that masked response for the target analyte, resulting in a qualitative ion ratio that was outside the theoretical ratio acceptance limits.

The concentrations of the isotopically labeled surrogate compounds added to each sample were determined the same as for the native analytes. The amount found was compared to the amount spiked, and the percent recovery was calculated. The native concentrations were not adjusted for surrogate recovery.

2.7 Coplanar PCB Data Reduction

A software application program developed by MRI was used to calculate the concentrations of coplanar PCBs, based on the isotope dilution approach, which adjusts the concentration of the native analyte for recovery of the internal quantitation standards (IQS) from the sample matrix. Qualitative identification requires the target analyte response to be within a specific retention time, and the quantitation ions must be within $\pm 20\%$ theoretical ratio criteria. Exact masses for tetra-, penta-, and hexa-PCBs were calculated by the HRMS data system.

The instrument was calibrated with the series of calibration standards given in Table 3. Relative response factors (RRFs) were determined for each native compound relative to the corresponding ¹³C-labeled internal quantitation standard (IQS) (Equation 3) and for each IQS relative to the recovery standard (RS) (Equation 4). The mean RRFs from the initial calibration curve were then used in subsequent calculations to determine sample amounts for each specific isomer or IQS. The RRF for analytes is calculated using the following equation:

$$RRF = \frac{A_{STD} \times C_{IS}}{A_{IS} \times C_{STD}}$$
 Eq. (3)

where: A_{STD} = the sum of the area responses for the two characteristic ions of the native standard;

A_{IS} = the sum of the area responses for the two characteristic ions of the corresponding internal quantitation standard;

 C_{1S} = concentration (pg/ μ L) of the internal quantitation standard; and

 C_{STD} = concentration (pg/ μ L) of the native standard.

The RRF for internal standards, RRF_{IS}, is calculated as:

$$RRF_{1S} = \frac{A_{1S} \times C_{RS}}{A_{RS} \times C_{1S}}$$
Eq. (4)

where A_{IS} and C_{IS} are defined as in Equation 3 and

C_{RS} = concentration (pg/μL) of the internal recovery standard, and
 A_{RS} = the sum of the area responses for the two characteristic ions corresponding to the recovery standard.

The coplanar PCB detection limits were based on 2.5 times the instrumental noise, adjusted for sample weight and extract volume. In some cases, the detection level is shown as an estimated maximum possible concentration (empc) attributed to coelution of interferences resulting in a failed ion ratio criterion.

As discussed in the Sample Preparation Section, known amounts of IQS are added to the samples before extraction, and the IQS concentration in the final extract is used to calculate the concentration of the native analytes in the final extract as an isotope dilution calculation technique. This calculation procedure (Equation 5) adjusts for recovery from the sample matrix.

$$C = \frac{A_{\text{Sample}} \times Q_{\text{ts}} \times V_{\text{e}}}{A_{\text{ts}} \times RRF \times V_{\text{s}}} \times SF$$
Eq. (5)

where: C = (pg/L) or concentration of the native analyte;

A_{sample} = sum of the area responses for the two characteristic ions of the analyte;

Q_{IS} = concentration (pg/μL) of the internal quantitation standard added to the sample;

 V_e = final extract volume (μ L);

A_{1S} = sum of the area responses for the two characteristic ions of the respective internal quantitation standard;

RRF = the average of the initial calibration relative response factors from Equation 3;

V_s = volume of sample (liters) extracted or weight of sample extracted (grams); and

SF = split factor = 2.

Recovery (%) =
$$\frac{A_{1S} \times Q_{RS}}{A_{RS} \times RRF_{1S} \times Q_{1S}} \times 100$$
 Eq. (6)

where: A_{RS} = sum of the area responses for the two characteristic ions of the internal recovery standard;

Q_{RS} = amount of the internal recovery standard added to the final extract; and

RRF_{IS} = the average of initial calibration response factors from Equation 4.

The recovery standards which are added to the sample at the final concentration step are used to establish the absolute recovery of the carbon-13 internal standards (Equation 6). The IQS recoveries are used to access overall method performance and adjust the results for native compounds.

2.8 Inlet Sample Calculations

The inlet samples that were determined to contain high concentrations of solids were split into two phases for extraction. The sample extracts were analyzed separately for the water and the sediment portion. Then, the ratio of sediment to water in the original sample was used to calculate the PCB concentration in the inlet slurry sample. This was accomplished in the following equations.

Sediment slurry component (pg/L) = analyte pg/g dry sediment basis x g dry sediment/L slurry ratio

For example,

Inlet sample 1102 contained 1.90 % dry sediment and 98.1% aqueous phase

The 1.9 % dry sediment corresponds to 19 g/ Liter in the inlet sample

Sediment slurry component (pg/L) = analyte pg/g dry basis X 19 g/L ratio

Aqueous slurry component (pg/L) = analyte pg/L water X .98 L/L

Total slurry concentration (pg/L) = sediment slurry component + Aqueous slurry component

Section 3. Results

This section provides the field sample results and quality control sample results. Field sample results include coplanar PCBs, mono-ortho and di-ortho congener-specific PCBs and total PCBs. Quality control sample results include method blanks, laboratory control spikes, matrix spikes, surrogate recoveries, and internal quantitation standard recoveries. Summary data tables containing field sample results were reported to Versar electronically on January 15, 1999. There are no changes to the data reported previously.

3.1 Coplanar PCB Results

The coplanar PCB results for the aqueous samples are presented in Table 9 and the inlet solid and aqueous phase results are summarized in Table 10. The coplanar PCB concentrations in the dry sediment recovered from the inlet samples and the calculated concentrations for the sediment contribution in the water and slurry mixture are presented. For one of the inlet samples, inlet 110598, only the concentration from the solid portion is reported because the aqueous phase extract was spilled during sample cleanup. This value represents the minimum concentrations of PCBs in the sample. The aqueous phase although not available, would contribute significantly less to the total concentration in the original inlet sample than the solid phase.

Detection limits are given for analytes not detected. Estimated maximum possible concentration (empc) detection limits are attributed to coeluting interferences that mask response for the target analytes.

3.2 HRGC/LRMS Congener-Specific PCBs

The congener-specific PCB sediment sample results determined by HRGC/LRMS are summarized in Table 11 for the aqueous samples and in Table 12 for the inlet samples. None of the aqueous samples, including the aqueous phases of the inlet samples, contained PCBs above the 25 ng/L reporting limit. Therefore, the inlet sample results shown in Table 12 are based only on the proportion of solids that accounted for detectable PCBs in the inlet samples. The corresponding total Homolog PCBs for the aqueous and inlet sample are summarized in Tables 13 and 14, respectively.

For compounds not detected, the detection limit based on the lowest calibration standard is shown in Tables 11 through 14. The percent solids for the sample is shown in the sample results header for each sample along with the field ID and MRI barcode

In cases where two congeners were not completely resolved chromatographically, the calibration was based on the sum of the coeluting congeners, and the results are shown as a congener pair.

3.3 Coplanar PCBs Quality Control Sample Results

The method blank results for the coplanar PCBs are presented in Tables 9 and 10 for comparison to sample results. Because of the low detection limits achieved by HRGC/HRMS there were detectable quantities of tetra coplanar PCBs 77 and 81 in the water blanks. Sample concentrations for PCB 81 were near the blank background levels. Tetra PCB 77 was detected in seven of the samples at concentrations at least three times the blank values. The remaining samples were close to the method blank values for PCB 77.

The laboratory control spike recovery results are presented in Table 15. These results demonstrate good batch-to-batch precision and method reproducibility for the aqueous and sediment sample preparation and analysis procedures. Recoveries were well within the 70% to 130% recovery objective.

Other quality control sample results include the absolute recoveries of the ¹³C₁₂ IQS added to each field sample and quality control sample before extraction. Tables 16 and 17 summarize the recoveries and show the mean recovery and standard deviation precision for aqueous and sediment matrices. Statistical performance charts for the coplanar internal quantitation standards, ¹³C₁₂ PCB 77, ¹³C₁₂ PCB 81, ¹³C₁₂ PCB 126, and ¹³C₁₂ 169, and are provided in Appendix B. The mean recovery and method performance limits based on two standard deviations from the mean are shown for each sample.

3.4 Congener Specific PCB Quality Control Sample Results

The quality control samples for the congener specific PCBs analysis conducted by HRGC/LRMS included method blanks, laboratory control spikes, and surrogate recoveries. No PCBs were detected in the method blanks as shown in Tables 11 through 14. Laboratory control spike (LCS) recoveries are presented in Table 18 for three batches of samples. The first two sample batches included aqueous LCS samples and the third batch included sediment LCS samples. Recoveries were within the 50% to 150% recovery objective for all 71 congeners.

The PCB surrogate recoveries for each of the field sample and quality control samples are summarized in Tables 19 and 20. Individual sample recoveries for each surrogate were evaluated statistically relative to 2 standard deviations from the mean. Method performance charts are provided in Appendix C. Statistical control limits based on 2 standard deviations from the mean recovery were used to evaluate method performance. Lower recoveries were observed for ¹³C₁₂ deca PCB surrogate in the field samples compared to the quality control samples for the sediment samples. These lower recoveries were attributed to sample matrix affects rather than systematic method performance difficulties. The overall performance of the method was judged acceptable for all three sample batches.

Table 1. Non-Ortho Coplanar PCB Congeners Substituted in Both Para and Two or More META Positions

IUPAC number	Structure	Homolog group	Target detection limit (pg/L)
77	3,3',4,4'	Tetra-CB	25
81	3,4,4′,5	Tetra-CB	25
126	3,3',4,4',5	Penta-CB	25
169	3,3',4,4 ,5,5'	Hexa-CB	25

Table 2. Mono-ortho and Di-ortho Targeted PCB Congeners for LRMS

IUPAC number	Structure	Homolog group	Target detection limit (ng/L)
8	2,4'	Di-CB	25
18	2,2′,5	Tri-CB	25
28	2,4,4'	Tri-CB	25
37	3,4,4'	Tri-CB	25
42	2,2',3,4'	Tetra-CB	25
44	2,2',3,5'	Tetra-CB	25
47	2,2',4,4'	Tetra-CB	25
49	2,2',4,5'	Tetra-CB	25
52	2,2',5,5'	Tetra-CB	25
60	2,3,4,4'	Tetra-CB	25
64	2,3,4',6	Tetra-CB	25
66	2,3',4,4'	Tetra-CB	25
70	2,3′,4′,5	Tetra-CB	25
74	2,4,4',5	Tetra-CB	25
80	3,3',5,5'	Tetra-CB	25
82	2,2',3,3',4	Penta-CB	25
84	2,2',3,3',6	Penta-CB	25
86	2,2',3,4,5	Penta-CB	25
87	2,2',3,4,5'	Penta-CB	25
91	2,2',3,4',6	Penta-CB	25
92	2,2',3,5,5'	Penta-CB	25
[.] 95	2,2′,3,5′,6	Penta-CB	25
97	2,2′,3′,4,5	Penta-CB	25
99	2,2',4,4',5	Penta-CB	25
101	2,2',4,5,5'	Penta-CB	25
105	2,3,3',4,4'	Penta-CB	25
110	2,3,3′,4′,6	Penta-CB	25
114	2,3,4,4′,5	Penta-CB	25
118	2,3',4,4',5	Penta-CB	25
119	2,3',4,4',6	Penta-CB	25
120	2,3',4,5,5'	Penta-CB	25
123	2',3,4,4',5	Penta-CB	25
127	3,3',4,5,5'	Penta-CB	25
128	2,2',3,3',4,4'	Hexa-CB	25
137	2,2′,3,4,4′,5	Hexa-CB	25
138	2,2',3,4,4',5'	Hexa-CB	25
141	2,2′,3,4,5,5′	Hexa-CB	25
146	2,2',3,4',5,5'	Hexa-CB	25
149	2,2′,3,4′,5′,6	Hexa-CB	25
151	2,2',3,5,5',6	Hexa-CB	25
153	2,2 ,4,4 ,5,5	Hexa-CB	25
156	2,3,3',4,4',5	Hexa-CB	25

Table 2 (Continued)

IUPAC number	Structure	Homolog group	Target detection limit (ng/L)
157	2,3,3',4,4',5'	Hexa-CB	25
158	2,3,3',4,4',6	Hexa-CB	25
166	2,3,4,4′,5,6	Hexa-CB	25
167	2,3',4,4',5,5'	Hexa-CB	25
168	2,3',4,4',5',6	Hexa-CB	25
170	2,2',3,3',4,4',5	Hepta-CB	25
171	2,2',3,3',4,4',6	Hepta-CB	25
174	2,2′,3,3′,4,5,6′	Hepta-CB	25 25
177	2,2′,3,3′,4′,5,6	Hepta-CB	25 25
179	2,2′,3,3′,5,6,6′	Hepta-CB	25 25
180	2,2',3,4,4',5,5'	Hepta-CB	25
183	2,2',3,4,4',5',6	Hepta-CB	25
185	2,2',3,4,5,5',6	Hepta-CB	25 25
187	2,2′,3,4′,5,5′,6	Hepta-CB	25 25
189	2,2,3,4,5,5,6 2,3,3',4,4',5,5'	Hepta-CB	25 25
190	2,3,3',4,4',5,6 2,3,3',4,4',5,6	Hepta-CB	25 25
191		Hepta-CB	25 25
194	2,3,3',4,4',5',6	Octa-CB	
195	2,2',3,3',4,4',5,5'	Octa-CB	25 25
196	2,2',3,3',4,4',5,6		25
198	2,2',3,3',4,4',5',6	Octa-CB	25
200	2,2',3,3',4,5,5',6	Octa-CB	25
201	2,2',3,3',4,5',6,6'	Octa-CB	25
	2,2',3,3',4',5,5',6	Octa-CB	25
203 205	2,2',3,4,4',5,5',6	Octa-CB	25 25
	2,3,3',4,4',5,5',6	Octa-CB	25
206	2,2′,3,3′,4,4′,5,5′,6	Nona-CB	25
207	2,2′,3,3′,4,4′,5,6,6′	Nona-CB	25
208	2,2',3,3',4,5,5',6,6'	Nona-CB	25
209	2,2',3,3',4,4',5,5',6,6'	Deca-CB	25

Table 3. HRMS Coplanar PCBs Calibration Standard Concentrations

PCB congener	Cal 1 pg/uL	Cal 2 pg/uL	Cal 3 pg/uL	Cal 4	Cal 5 pg/µL
81 Tetra	5	20	100	250	. 500
77 Tetra	5	20	100	250	500
126 Penta	5	20	100	250	500
169 Hexa	5	20	100	250	500
Internal Quantitation St	andards				
¹³ C ₁₂ 77 Tetra	100	100	100	100	100
¹³ C ₁₂ 81 Tetra	100	100	100	. 100	100
¹³ C ₁₂ 126 Penta	100	100	100	100	100
¹³ C ₁₂ 169 Hexa	100	100	100	100	100
Recovery Standard	100	100	100	100	100
¹³ C ₁₂ 1,2,3,4-TCDD	100	100	100	100	100

Table 4. LRMS PCBs Calibration Standard Concentrations

PCB	CAL1	CAL2	CAL 3	CAL4	CAL 5	CAL 6
congener	ng/mL	ng/mL	ng/mL	ng/mL	ng/mL	ng/mL
8	12.5	25	50	100	200	400
18	12.5	25	50	100	200	400
28	12.5	25	50	100	200	400
37	12.5	25	50	100	200	400
42	12.5	25	50	100	200	400
44	12.5	25	50	100	200	400
47	12.5	25	50	100	200	400
49	12.5	25	50	100	200	400
52	12.5	25	50	100	200	400
60	12.5	25 25	50	100	200	400
64	12.5	25 25	50 50	100		
66	12.5	25 25	50 50	100	200	400
70	12.5	25 25	· 50	100	200	400
4					200	400
74	12.5	25 25	50	100	200	400
80	12.5	25 25	50 50	100	200	400
82	12.5	25 25	50	100	200	400
84	12.3	25	49	98	196	392
86	12.5	25	50	100	200	400
87	12.5	25	50	100	200	400
91	12.5	25	50	100	200	400
92	12.5	25	50	100	200	400
95	12.5	25	50	100	200	400
97	12.5	25	50	100	200	400
99	12.5	25	50	100	200	400
101	12.5	25	50	100	200	400
105	12.5	25	50	100	200	400
110	12.5	25	50	100	200	400
114	12.5	25	50	100	200	400
118	12.5	25	50	100	200	400
119	12.5	25	50	100	200	400
120	12.5	25	50	100	200	400
123	12.5	25	· 50	100	200	400
127	12.5	25	50	100	200	400
128	12.5	25	50	100	200	400
137	12.5	25	50	100	200	400
138	12.5	25	50	100	200	400
141	12.5	25	50	100	200	400
146	12.5	25	50	100	200	400
149	12.5	25	50	100	200	400
151	12,5	25	50	100	200	400
153	12.5	25	50	100	200	400
156	12.5	25	50	100	200	400
157	12.5	25	50	100	200	400
158	12.5	25	50	100	200	400

Table 4 (Continued)

PCB	CAL1	CAL2	CAL 3	CAL4	CAL 5	CAL 6
congener	ng/ml_	ng/mL	ng/mL	ng/mL	ng/mL	ng/mL
166	12.5	25	50	100	200	400
167	12.5	25	50	100	200	400
168	12.5	25	50	100	200	400
170	12.5	25	50	100	200	400
171	12.5	25	50	100	200	400
174	12.5	25	50	100	200	400
177	12.3	25	49	98	196	392
179	12.5	25	50	100	200	400
180	12.5	25	50	100	200	400
183	12.5	25	50	100	200	400
185	12.5	25	50	100	.200	400
187	12.5	25	50	100	200	400
189	12.5	25	50	100	200	400
190	12.5	25	50	100	200	400
191	12.5	25	50	100	200	400
194	12.5	25	50	100	200	400
195	12.5	25	50	100	200	400
196	12.5	25	50	100	200	400
198	12.5	25	50	100	200	400
200	12.5	25	50	100	200	400
201	12.3	25	49	98	196	392
203	12.5	25	50	100	200	400
205	12.5	25	50	100	200	400
206	12.5	25	50	100	200	400
207	12.5	25	50	100	200	400
208	12.5	25	50	100	200	400
209	12.5	25	50	100	200	400
Surrogates						
¹³ C ₆ mono PCB	7.8	15.6	31.3	62.5	125	250
¹³ C ₁₂ tri PCB	7.8	15.6	31.3	62.5	125	250
¹³ C ₁₂ tetra PCB	12.5	25.0	50	100	200	400
¹³ C ₁₂ hexa PCB	12.5	25.0	50	100	200	400
¹³ C ₁₂ octa PCB	29.4	58.8	118	235	470	940
¹³ C ₁₂ deca PCB	33.1	66.3	133	265	530	1060
d ₆ Tetra 77 IS	200	200	200	200	200	200

Table 5. Laboratory Surrogates Standard Spiking Solutions

Compound	Amount spiked (ng)
Laboratory Surrogates for HRGC/LF	
PCB surrogates	•
¹³ C ₆ -Mono (3)a	200
¹³ C ₁₂ -Tri (28)	200
¹³ C ₁₂ -Tetra (52)	200
¹³ C _{1Z} Hexa (153)	200
¹³ C ₁₂ Octa (202)	470
¹³ C ₁₂ -Deca (209)	530

^a Ballschmitter congener number shown in parentheses.

Table 6. ¹³C₁₂ Internal Quantitation Standard and Recovery Standard Spiking Solutions for HRGC/HRMS Analysis

Compound	Amount spiked (total pg)
Internal quantitation standard	
¹³ C ₁₂ PCB 77	2000
¹³ C ₁₂ PCB 81	2000
¹³ C ₁₂ PCB 126	2000
¹³ C ₁₂ PCB 169	2000
Recovery Standard	
¹³ C ₁₂ -1,2,3,4-TCDD	1,000
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	1,000

Table 7. Operating Parameters for HRGC/LRMS Analysis

Mass spectrometer	Fisons MD 800
Electron energy	70 eV
Filament current	4.0 A
Source current	2104 μΑ
Trap current	103 μΑ
Start mass	35 <i>m</i> /z
End mass	550 <i>m/z</i>
Gas chromatograph	Hewlett Packard 5890
Column coating	DB-5
Film thickness	0.25 μm
Column dimensions	30-m x 0.25-mm i.d.
Solvent delay	√5 min
Injector temp	280°
Injection size	2 µԼ
Initial temp	70°
Initial time	2
First temperature program	15°/min to 170°
Second temperature program	4°/min
Final temperature	300°

Table 8. HRGC/HRMS Operating Conditions for Coplanar PCB Analysis

Mass Spectrometer	VG70-S
Accelerating voltage:	8,000 V
Trap current:	500 μΑ
Electron energy:	35 eV
Photo-multiplier voltage:	340 V
Source temperature:	280°C
Resolution:	≥ 10,000 (10% valley definition)
Overall SIM cycle time:	1 sec
Gas Chromatograph	Hewlett Packard 5890
Column coating:	DB-5MS
Film thickness:	0.25 μm
Column dimensions:	60 m x 0.25 mm i.d.
He linear velocity:	- 25 cm/sec
He head pressure:	25 psi
Injection type:	Splitless, 45 sec
Split flow:	30 mL/min
Purge flow:	3 m⊔/min
Injector temperature:	290°C
Interface temperature:	280°C
Injection size:	1 μL
Initial temperature:	200°C
Initial time:	2 min
Temperature program:	200° to 220°C at 5°C/min
Second hold time:	16 min
Second temperature ramp:	220° to 235°C at 5°C/min
Third hold time:	7 min
Third temperature ramp:	235° to 330°C at 5°C/min
Final hold time:	9 min

Table 9. Coplanar PCB Results for Aqueous Samples (pg/L)

						<u> </u>		
Isomer	Field ID Extract ID MS File Matrix Batch (units)	Method Blank b1 41158 L18V12.RPT Method Blank 1 (pg/L)	Method Blank b2 41198 L28V11.RPT Method Blank 2 (pg/L)	MIX 1102 41140 L18V15.RPT Water 1	WEIR 1102 41141 L18V16.RPT Water 1 (pg/L)	MIX 102998 41142 L18V17.RPT Water 1	BG 102998 41143 L18V18.RPT Water 1	WEIR 102998 41144 L18V19.RPT Water 1
	(Ornio)	(pg/c)	, (pg/c)	(pg/L)	(Pg/L)	(pg/L)	(pg/L)	(pg/L)
81-TCB		11.3	9.6	8.34	U (9.99 EMPC)	9.1	6.7	U (8.81 EMPC)
77-TCB		17.6	19	29.7	44.4	63.8	24	47.6
126-PeCB		U (2.64)	U (2.61)	2.84	U (2.6 EMPC)	U (5.4 EMPC)	U (1.96)	U (5.21 EMPC)
169-HxCB		U (4.13)	U (2.02)	2.05	U (2.44)	U (5.54)	U (2.42)	U (2.88)

U—Undelected with the noise based detection limit given in parenthesis.

EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

Isomer	Field ID Extract ID MS File Matrix Batch (units)	EB 112598 41145 L18V110.RPT Water 1 (pg/L)	BG 1116 41146 L18V111.RPT Waler 1 (pg/L)	MIX 1116 41147 L18V114.RPT Water 1 (pg/L)	WEIR 1116 41148 L18V115.RPT Waler 1 (pg/L)	WEIR 110598 41149 L18V116.RPT Waler 1 (pg/L)	WEIR 1112 41150 L18V117.RPT Waler 1 (pg/L)	WEIR 1109 41151 L18V118.RPT Waler 1 (pg/L)
81-TCB		7.3	8.19	7.5	6.86	U (11.1 EMPC)	7.71	7.5
77-TCB		13.3	12.9	28.6	34.3	63.1	42.6	58.3
126-PeCB		U (1.77)	U (2.5)	U (1.09)	U (2.4)	U (4.85 EMPC)	3.96	6.37
169-HxCB		U (2.5)	U (3.45)	3	U (2.48)	U (2.98)	U (2.07)	U (2.46)

U—Undetected with the noise based detection limit given in parenthesis.

EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

Isomer	Field ID Extract ID MS File Malrix Balch (units)	INLET 1102 41182 L28V16.RPT Water 2 (pg/L)	INLET 102698 41183 L28V17.RPT Waler 2 (pg/L)	BG 1112 41184 L28V18.RPT Waler 2 (pg/L)	MIX 1109 41185 L28V111.RPT Waler 2 (pg/L)	MIX 110598 41187 L28V112.RPT Water 2 (pg/L)	WEIR 1119 41188 L28V113.RPT Water 2 (pg/L)	WEIR 1124 41189 L28V114.RPT Water 2 (pg/L)
81-TCB	·	8.1	13.4	U (9.66 EMPC)	U (9.39 EMPC)	U (8.23 EMPC)	8.8	U (9.35 EMPC)
77-TCB		33.9	62.4	94.4	26.6	28.2	27.4	27.8
126-PeCB		U (2.46)	8.78	5.93	U (1.85)	U (2.36)	2.85	U (4.32)
169-HxCB		U (1.82)	U (3.89)	U (2.38 EMPC)	U (2.97)	U (1.61)	U (1.94)	U (4.41)

U—Undetected with the noise based detection limit given in parenthesis.

EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 9 (Continued)

	Field ID Extract ID MS File Matrix Balch	MIX 1112 41190 L28V115.RPT Waler 2	BG 1119 41191 L28V116.RPT Water · 2	MIX 1119 41192 L28V117.RPT Waler 2	INLET 101598 41193 L28V118.RPT Water 2
Isomer	(unils)	(pg/L)	(pg/L)	(pg/L)	(pg/L)
81-TCB		U (6.97 EMPC)	7.41	6.96	9.99
77-TCB		37.9	18.2	. 19.9	57.6
126-PeCB		2.78	U (1.75)	U (2.78 EMPC)	4.43
169-HxCB		U (2.18)	U (3.01)	U (1.61)	U (2.81)

U—Undetected with the noise based detection limit given in parenthesis.

EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit.

Table 10. Coplanar PCB Results for Inlet Samples-pg/g Sediment Concentration and pg/L Slurry

Isomer	Field ID Extract ID MS File Matrix (units)	Method Blank b3 41241 A06V11.RPT Method Blank (pg/g)	INLET 1102 41233 A06V16.RPT sediment (pg/g)	INLET 1102 41233 A06V16.RPT sediment Slurry Component (pg/L)	INLET 1102 41182 L28V16.RPT Waler (pg/L)	INLET 1102 41182 L28V16.RPT Water Slurry Component (pg/L)	INLET 1102 Total Slurry (pg/L)	INLET 102698 41234 A06V17.RPT sediment (pg/g)	INLET 102698 41234 A06V17.RPT sediment Slurry component (pg/L)	INLET 102698 41183 L28V17.RPT Water (pg/L)
81-TCB		1.14	8.0	152	8.1	7.95	160	9.75	616	13.4
77-TCB		5.15	437	8303	33.9	33.3	8336	585	36972	62.4
126-PeCB		U(.311)	19.5	371	U(2.46)	U(2.46)	371	21.1	1334	8.78
169-HxCB		U(.16)	4.34	82	U(1.82)	U(1.82)	82.5	4.55	288	U(3.89)

U - Undetected with the noise based detection limit given in parenthesis.

Slurry component pg/L = (pg/g dry sediment concentration) X (g dry sediment/ L Slurry)

Inlet Sample 1102= 1.90% Dry sediment, 98.1% Aqueous Inlet Sample 102698 = 6.32% Dry sediment, 93.7% Aqueous

Inlet Sample 110598=6.56 % Dry sediment

Inlet Sample 110598=4.83 % Dry sediment, 95.2% Aqueous
Total Slurry pg/L = Sediment Component of Slurry pg/L + Aqueous Component of Slurry pg/L

Table 10 (Continued)

		INLET 102698	•		INLET 110598 41235		INLET 101598		INLET 101598 41193	
	Field ID Extract ID	41183		INLET 110598	A06V18.RPT	INLET 101598		INLET 101598	L28V118.RPT	
1	MS File	L28V17,RPT Water	INLET 102698	41235 A06V18.RPT	sediment Slurry	41236 - A06V19.RPT	A06V19.RPT sediment	41193 L28V118.RPT	Water Slurry	INLET 101598
	Matrix	Slurry component	Total Slurry	sediment	component	sediment	Slurry component		Component	Total Slurry
Isomer	(unils)	(pg/L)	(pg/L)	(pg/g)	(pg/L)	(pg/g)	(pg/L)	(pg/L)	(pg/L)	(pg/L)
81-TCB		12.6	629	8.64	567	8.02	387	9.99	9.51	397
77-TCB		58.5	37030	420	27552	346	16712	57.6	54.8	16767
126-PeCB		8.2	1342	19.7	1292	19	918	4.43	4.22	922
169-HxCB	·	U(3.89)	288	4.6	302	4.22	204	U(2.81)	U(2.81)	204

U - Undelected with the noise based detection limit given in parenthesis.

Slurry component pg/L = (pg/g dry sediment concentration) X (g dry sediment/ L Slurry)
Inlet Sample 1102= 1.90% Dry sediment, 98.1% Aqueous
Inlet Sample 102698 = 6.32% Dry sediment, 93.7% Aqueous
Inlet Sample 110598=6.56 % Dry sediment (Aqueous portion tost during sample preparation)
Inlet Sample 101598=4.83 % Dry sediment, 95.2% Aqueous

Total Slurry pg/L = Sediment Component of Slurry pg/L + Aqueous Component of Slurry pg/L

Table 11. Congener Specific PCB Results for Aqueous Samples

	Field ID	Method Blank b1	Method Blank b2	MIX 1102	WEIR 1102	MIX 102998	BG 102998	WEIR 102998
	Extract ID	41156	41198	41140	41141	41142	41143	41144
	Matrix	Melhod Blank	Method Blank	Water	Water	Water	Water	Water
PCB	% Solids		-	0.146	0.148	0.158	. 0.218	0.183
Congener	(units)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)
8 Di		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)	U <u>(</u> 25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		` U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)	U (25)	. U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
82 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
123 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
114 Penta		U (25)	ປ (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

ID 41156 Method Blank ds - (ng/L) U (25)	41198 Method Blank - (ng/L) U (25)	41140 Water 0.146 (ng/L) U (25) U 41 Water 0.148 (ng/L) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)	41142 Water 0.158 (ng/L) U (25) U	41143 Water 0.218 (ng/L) U (25) U	41144 Waler 0.183 (ng/L) U (25) U	
ds -) (ng/L) U (25)	(ng/L) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)	0.146 (ng/L) U (25) U	0.148 (ng/L) U (25) U	0.158 (ng/L) U (25) U	0.218 (ng/L) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)	0.183 (ng/L) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)
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U (25)	U (25) U (25)	U (25)			·	U (25)
- •	• •		U (25)	11/251		
U (25)	11/25)		-	0 (23)	U (25)	U (25)
V (2-0)	U (20)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
· -				U (25)	U (25)	U (25)
· •				U (25)	U (25)	U (25)
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	, ,		, ,		• •	U (25)
• • •				• •		U (25)
- •				• •		U (25)
U (20)	· -				•	U (25)
11 (25)	U (23)	0 (23)			U (25)	U (25)
	U (25) U (25) U (25) U (25) U (25) U (25) U (25)	U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)	U (25) U (25)	U (25) U (25)	U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)	U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25) U (25)

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Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	Method Blank b1 41156 Method Blank - (ng/L)	Melhod Blank b2 41198 Melhod Blank (ng/L)	MIX 1102 41140 Water 0.146 (ng/L)	WEIR 1102 41141 Waler 0.148 (ng/L)	MIX 102998 41142 Water 0.158 (ng/L)	BG 102998 41143 Water 0.218 (ng/L)	WEIR 102998 41144 Water 0.183 (ng/L)
194 Octa		U (25)	U (25)	ป (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	บ (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congene	ers	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	EB 112598 41145 Water 0.002 (ng/L)	BG 1116 41146 Waler 0.261 (ng/L)	MiX 1116 41147 Waler 0.171 (ng/L)	WEIR 1116 41148 Water 0.145 (ng/L)	WEIR 110598 41149 Waler 0.145 (ng/L)	WEIR 1112 41150 Waler 0.149 (ng/L)	WEIR 1109 41151 Water 0.143 (ng/L)	INLET 1102 41182 Water 1.9 (ng/L)
8 DI		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri -		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		U (25)	じ (25)	ับ (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	บ (25)	U (25)	U (25)	U (25)	U (25)	U (25)
64 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)	บ (25)	U (25)	U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penla	-	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
120 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
110 Penta		ป (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
32 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

	Field ID Extract ID Matrix	EB 112598 41145 Water	8G 1116 41146 Waler	MIX 1116 41147 Waler	WEIR 1116 41148 Water	WEIR 110598 41149 Water	WEIR 1112 41150 Water	WEIR 1109 41151 Water	INLET 1102 41182 Water
РСВ	% Solids	0.002	0.261	0.171	0.145	0.145	0.149	0.143	1.9
Congener	(unils)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)
123 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
118 Penta		U (25)	- U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
114 Penta		U (25)	U (25)	U (25)	U (25)	ับ (25)	U (25)	U (25)	U (25)
105 Penta		U (25)	U (25)	U (25)	U (25)	ປ (25)	U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	Ư (25)	U (25)	U (25)	U (25)	U (25)	U (25)
146 hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
141 Hexa	•	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)	Ս (25)	U (25)	U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
187 Hepta		U (25)	Մ (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
185 Hepta		Մ (25)	Մ (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	년 (25)	U (25)	U (25)	U (25)	U (25)	U (25)
171 Hepla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
160 Hepla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	<u>U (25)</u>	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	EB 112598 41145 Water 0.002 (ng/L)	BG 1116 41146 Waler 0.261 (ng/L)	MIX 1116 41147 Water 0.171 (ng/L)	WEIR 1116 41148 Waler 0.145 (ng/L)	WEIR 110598 41149 Water 0.145 (ng/L)	WEIR 1112 41150 Water 0.149 (ng/L)	WEIR 1109 41151 Water 0.143 (ng/L)	INLET 1102 41182 Waler 1.9 (ng/L)
189 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
198 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
196,203 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
194 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

MRI-CSIPR5356-01.DOC

Table II (Continued)

	Field ID	INLET 102698	BG 1112	MIX 1109	MIX 110598	WEIR 1119	WEIR 1124	MIX 1112
	Extract ID	41183	41184	41185	41187	41188	41189	41190
	Matrix	Waler	Water	Water	Water	Waler	Waler	Water
PCB	% Solids	6.322	0.291	0.187	0.133	0.149	0.162	0.177
Congener	(units)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)	(ng/L)
8 DI		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
49 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
44 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
64 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
74 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
66 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
80 Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
60 Tetra		U (25)	U (25)	U (25)	U (25)	-U (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
91 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
92 Penta		ឋ (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
84/101 Penla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
99 Penla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
37 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
20 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
10 Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	
2 Penta		U (25)	U (25)	U (25)	U (25)	U (25)		U (25)
23 Penta		U (25)	U (25)	U (25)	U (25)		U (25)	U (25)
18 Penta		U (25)	U (25)	U (25)		U (25)	U (25)	U (25)
14 Penta		U (25)		• •	U (25)	U (25)	U (25)	U (25)
rereina		U (20)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

Table 11 (Continued)

	Field ID Extract ID Matrix	INLET 102698 41183 Waler	BG 1112 41184 Water	MIX 1109 41185 Water	MIX 110598 41187 Water	WEIR 1119 41188 Water	WEIR 1124 41189 Water 0.162	MIX 1112 41190 Waler 0.177
PCB	% Solids	6.322	0.291	0,187 (ng/L)	0.133 (ng/L)	0.149 (ng/L)	(ng/L)	(ng/L)
Congener	(unils)	(ng/L)	(ng/L)	U (25)	U (25)	U (25)	U (25)	U (25)
105 Penta		U (25)	U (25)		U (25)	U (25)	U (25)	บ (25)
151 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25) U (25)	U (25)	U (25)	U (25)	U (25)
146 Hexa		U (25)	U (25)		U (25)	U (25)	U (25)	U (25)
153 Hexa		U (25)	U (25)	U (25)		U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
137 Hexa		U (25)	U (25)	U (25)	U (25)	• •	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	• •	บ (25)
128/167 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	ປ (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	
157 Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
179 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
187 Hepla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
183 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
185 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
171 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
180 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
170,190 Hepla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
189 Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
198 Ocla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
201 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
196,203 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
195 Ocla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

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Table 11 (Continued)

PCB Congener	Field ID Extract ID Matrix % Solids (units)	INLET 102698 41183 Waler 6.322 (ng/L)	BG 1112 41184 Water 0.291 (ng/L)	MIX 1109 41185 Water 0.187 (ng/L)	MIX 110598 41187 Waler 0.133 (ng/L)	WEIR 1119 41188 Waler 0.149 (ng/L)	WEIR 1124 41189 Water 0.162 (ng/L)	MIX 1112 41190 Water 0.177 (ng/L)
194 Octa	·	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Congene	rs	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (Liters)

Table 11 (Continued)

	Field ID	BG 1119	MIX 1119	INLET 101598
	Extract ID	41191	41192	41193
	Matrix	Water	Waler	Waler
PCB	% Solids	0.32	0.201	4.83
Congener	(unils)	(ng/L)	(ng/L)	(ng/L)
8 DI		U (25)	U (25)	U (25)
18 Tri		U (25)	U (25)	U (25)
28 Tri		U (25)	U (25)	U (25)
37 Tri		U (25)	U (25)	U (25)
52 Tetra		U (25)	U (25)	U (25),
49 Tetra		U (25)	U (25)	U (25)
47 Tetra		U (25)	U (25)	U (25)
44 Tetra		U (25)	U (25)	U (25)
42 Tetra		U (25)	U (25)	U (25)
64 Telra		U (25)	U (25)	U (25)
74 Tetra		U (25)	U (25)	U (25)
70 Tetra		U (25)	U (25)	U (25)
66 Tetra		U (25)	U (25)	U (25)
80 Tetra		U (25)	U (25)	U (25)
60 Tetra		ป (25)	U (25)	U (25)
95 Penta		U (25)	U (25)	U (25)
91 Penla		U (25)	U (25)	U (25)
92 Penla		U (25)	U (25)	ป (25)
84/101 Penta		U (25)	U (25)	U (25)
99 Penta		U (25)	U (25)	U (25)
119 Penta		U (25)	U (25)	U (25)
97/86 Penta		U (25)	U (25)	U (25)
87 Penta		U (25)	U (25)	U (25)
120 Penta		ป (25)	U (25)	U (25)
110 Penta		U (25)	U (25)	U (25)
82 Penta		υ (25)	U (25)	U (25)
123 Penta		U (25)	U (25)	U (25)
118 Penta		U (25)	U (25)	U (25)
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	Field ID	BG 1119	MIX 1119	INLET 101598
	Extract ID	41191	41192	41193
	Matrix	· Water	Water	Water
PCB	% Solids	0.32	0.201	4.83
Congener	(unils)	(ng/L)	(ng/L)	(ng/L)
114 Penta		U (25)	U (25)	U (25)
105 Penta		U (25)	U (25)	U (25)
151 Hexa		U (25)	U (25)	U (25)
149 Hexa		U (25)	U (25)	U (25)
146 Hexa		U (25)	U (25)	U (25)
153 Неха		U (25)	U (25)	U (25)
168 Hexa		U (25)	U (25)	U (25)
141 Hexa		U (25)	U (25)	บ (25)
137 Hexa		U (25)	U (25)	U (25)
138 Hexa		U (25)	U (25)	U (25)
158 Hexa		U (25)	U (25)	U (25)
166 Hexa		U (25)	U (25)	U (25)
128/167 Hexa		U (25)	U (25)	U (25)
156 Hexa		U (25)	U (25)	U (25)
157 Hexa		U (25)	U (25)	U (25)
179 Hepla		Ư (25)	U (25)	U (25)
187 Hepta		U (25)	U (25)	U (25)
183 Hepla		U (25)	U (25)	U (25)
185 Hepla		U (25)	U (25)	U (25)
174 Hepta		U (25)	U (25)	U (25)
177 Hepta		U (25)	U (25)	U (25)
171 Hepla		U (25)	U (25)	U (25)
180 Hepla		U (25)	U (25)	U (25)
191 Hepta		U (25)	U (25)	U (25)
•		U (25)	U (25)	U (25)
170,190 Hepta		U (25)	U (25)	U (25)
189 Hepta		U (25)	U (25)	U (25)
200 Octa		U (25)	U (25)	U (25)
198 Octa			• •	
201 Octa		U (25)	U (25)	U (25)

Table 11 (Continued)

		·		
	Field ID	BG 1119	MIX 1119	INLET 101598
	Extract ID	41191	41192	41193
	Matrix	Water	Water	Water
PCB	% Solids	0.32	0.201	4.83
Congener	(unils)	(ng/L)	(ng/L)	(ng/L)
196,203 Octa		U (25)	U (25)	U (25)
195 Octa		U (25)	U (25)	U (25)
194 Octa		U (25)	U (25)	U (25)
205 Octa		U (25)	U (25)	U (25)
208 Nona		U (25)	U (25)	U (25)
207 Nona		U (25)	U (25)	U (25)
206 Nona		U (25)	U (25)	U (25)
209 Deca		U (25)	U (25)	U (25)
Sum of Congeners		U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

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Table 12. Congener Specific PCB Results for Inlet Samples-ng/g Sediment Concentration and ng/L Slurry

· · · · · · · · · · · · · · · · · · ·	Field ID	Jones S	INLET 1102	5 Results 101	INLET 102698	0.0	INLET 110598		INLET 101598	
}		Melhod Blank	41233	INLET 1102	41234	INLET 102698	41235	INLET 110598	41236	INLET 101598
	Matrix	b3	sediment	41233	sediment	41234	sediment	41235	sediment	41236
	Slurry % Solids		1.9	sediment	6.32	sediment	6.56	sediment	4.83	sediment
	g solids/liler	Melhod Blank	19	Slurry Component		Slurry component	65.6	Slurry component	48.3	Slurry component
PCB Congener	(units)	(ng/g)	(ng/g)	(ng/L)	(ng/g)	(ng/L)	(ng/g)	(ng/L)	(ng/g)	(ng/L)
8 DI		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
18 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
28 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
37 Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
52 Telra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
49 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
47 Telra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
44 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
42 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
64 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
74 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
70 Telra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
66 Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
80 Tetra		U(2.5)	U(2.5)	U(4B)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
60 Tetra		U(2.5)	U(2.5)	· U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
95 Penla		U(2.5)	4.38	83.22	3.84	242.688	9.16	600.896	5.36	258.888
91 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
92 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
84/101 Penta		U(2.5)	8.17	155.23	5.82	367.824	5.86	384.416	7.41	357.903
99 Penla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
119 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
97/86 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
87 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
120 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
110 Penta			U(8.7 EMPC)	U(165 EMPC)	U(6.94 EMPC)		U(6.32 EMPC)	U(415 EMPC)	U(5.64 EMPC)	U(264 EMPC)
82 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
123 Penla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
118 Penla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
114 Penta		ป(2.5)	U(2.5)	· U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
105 Penta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
151 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
149 Hexa		U(2.5)	4.52	85.88	7.79	492.328	8.39	550.384	5.13	247.779
146 hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
153 Hexa		IJ(2.5)	8.36	158.84	5.24	331.168	10.5	688.8	4.77	230.391
168 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
141 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	_U(2.5)	U(164)	U(2.5)	U(121)

Table 12 (Continued)

	Fleid ID		INLET 1102		INLET 102698		INLET 110598		INLET 101598	
	Extract ID	Method Blank	41233	INLET 1102	41234	INLET 102698	41235	INLET 110598	41236	INLET 101598
	Matrix	b3	sediment	41233	sediment	41234	sediment	41235	sedimenl	41236
	Slurry % Solids	41241	1.9	sediment	6.32	sediment	6.56	sediment	4.83	sediment
202.0		Method Blank	. 19	Slurry Component		Slurry component	65.6	Slurry component	48.3	Slurry componen
PC8 Congener	(units)	(ng/g)	(ng/g)	(ng/L)	(ng/g)	(ng/L)	(ng/g)	(ng/L)	(ng/g)	(ng/L)
137 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
138 Hexa		U(2.5)	U(2.5)	U(48)	U(7.86 EMPC)	U(487 EMPC)	U(2.5)	U(164)	U(2.5)	U(121)
158 Hexa		Ų(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
166 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
128/167 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
156 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
157 Hexa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
179 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
187 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
183 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
185 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
174 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
177 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	Ú(2.5)	U(121)
171 Hepla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
180 Hepta		U(2.5)	4.04	76.76	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
191 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
170,190 Hepla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
189 Hepta		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	Ü(121)
200 Ocla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
198 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
201 Ocla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
196,203 Ocla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
195 Ocla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
194 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
205 Octa		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
208 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
207 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
206 Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
209 Deca		U(2.5)	5.6	106.4	5.34	337,488	6.35	416.56	5.62	271,446
Sum of Congeners		U(2.5)	35.07	666.33	28.03	1771,496	40.26	2641.056	28.29	1366.407

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (Liters) EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit. ng/L Sturry =(ng/g dried sediment) X (g sediment dry weight/liter sturry)

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Table 13. PCB Homolog Results for Aqueous Samples

Homolog	Field ID Extract ID Matrix (units)	Method Blank b1 41156 Method Blank (ng/L)	Melhod Blank b2 41198 Melhod Blank (ng/L)	MIX 1102 41140 Water (ng/L)	WEIR 1102 41141 Waler (ng/L)	MIX 102998 41142 Waler (ng/L)	BG 102998 41143 Water (ng/L)	WEIR 102998 41144 Water (ng/L)
Мопо		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Di		U (25)	U (25)	· U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepla		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	EB 112578 41145 Waler (ng/L)	BG 1116 41146 Waler (ng/L)	MIX 1116 41147 Water (ng/L)	WEIR 1116 41148 Water (ng/L)	WEIR 110598 41149 Waler (ng/L)	WEIR 1112 41150 Water (ng/L)	WEIR 1109 41151 Water (ng/L)
Mono		U (25)	U (25)	U (25)	U (25)	Ú (25)	U (25)	U (25)
DI		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Telra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	บ (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona	-	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

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Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	INLET 1102 41182 Waler (ng/L)	INLET 102698 41183 Water (ng/L)	BG 1112 41184 Waler (ng/L)	MIX 1109 41185 Water (ng/L)	MIX 110598 41187 Water (ng/L)	WEIR 1119 41188 Water (ng/L)	WEIR 1124 41189 Water (ng/L)
Мопо		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
DI		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	บ (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Octa		U (25)	บ (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U (25)	U (25)	U (25)	U (25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

Table 13 (Continued)

Homolog	Field ID Extract ID Matrix (units)	MiX 1112 41190 Water (ng/L)	BG 1119 41191 Water (ng/L)	MIX 1119 41192 Waler (ng/L)	INLET 101598 41193 Water (ng/L)
Mono		U (25)	U (25)	じ (25)	U (25)
DI		U (25)	U (25)	U (25)	U (25)
Tri		U (25)	U (25)	U (25)	U (25)
Tetra		U (25)	U (25)	U (25)	U (25)
Penta		U (25)	U (25)	U (25)	U (25)
Hexa		U (25)	U (25)	U (25)	U (25)
Hepta		U (25)	U (25)	U (25)	U (25)
Octa		U (25)	U (25)	U (25)	U (25)
Nona		U (25)	U (25)	U (25)	U (25)
Deca		U (25)	U (25)	U (25)	U (25)
Sum of Homologs		U_(25)	U (25)	U (25)	U (25)

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, adjusted for final volume and sample volume (liters)

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Table 14. PCB Homolog Results for Inlet Samples-ng/g Sediment Concentration and ng/L Slurry

Homolog	Field ID Extract ID Matrix Slurry % Solids g solids/Liter (unils)	Method Blank b3 41241 Method Blank (ng/g)	INLET 1102 41233 sediment 1.9 19 (ng/g)	INLET 1102 41233 sediment Slurry Component (ng/L)	INLET 102698 41234 sediment 6.32 63.2 (ng/g)	INLET 102698 41234 sediment Slurry component (ng/L)	INLET 110598 41235 sediment 6.56 65.6 (ng/g)	INLET 110598 41235 sediment Slurry component (ng/L)	INLET 101598 41236 sediment 4.83 48.3 (ng/g)	INLET 101598 41236 sediment Slurry component (ng/L)
Mono		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Oi		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Tri		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Tetra		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Penla		U(2.5)	12.55	238	9.66	611	15.02	985	12.77	617
Hlexa		U(2.5)	12.88	245	13.03	823	18.89	1239	9.9	478
Hepla		U(2.5)	4.04	76.76	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Ocla		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Nona		U(2.5)	U(2.5)	U(48)	U(2.5)	U(158)	U(2.5)	U(164)	U(2.5)	U(121)
Deca		U(2.5)	5.6	106.4	5.34	337	6.35	417	5.62	271
Sum of Homolo	ogs	U(2.5)	35.07	666	28.03	1771	40.26	2641	28.29	1366

U (#) = Compound Not detected; value in parentheses is the reporting limit based on the lowest calibration standard, final volume, and sample amount extracted (g or L) EMPC—A peak was detected that did not meet the method criteria. The peak areas were used to calculate an Estimated Maximum Possible Concentration for the detection limit. ng/L Sturry = (ng/g dried sediment) X (g sediment dry weight/Liter sturry)

Table 15. Coplanar PCBs Laboratory Control Spike Results

	A	Carllana	Sample ID	LCS b1	LCS b1	LCS b2	LCS b2			LCS1 b3	LCS2 b3		
Isomer	Aqueous Spike Levei pg/L	Sediment Spike Level pg/g	Extract ID MS File Units	41155 L18V13.RPT % Recovery	41154 L28V14.RPT % Recovery	41197 L28V12.RPT % Recovery		Mean % Recovery	RSD n=4	41239 A06V12.RPT % Recovery	*	Mean % Recovery	RPD n=2
81-TCB	4000	400		102	100	97.8	97.3	99.3	2.2	91.5	91.5	91.5	0.00
77-TCB	4000	400		102	98.8	97.8	96.8	98.8	2.3	94	93	93.5	1.07
126-PeCB	4000	400		105	102	101	101	102	1.9	102	102	102	0.24
169-HxCB	4000	400		109	106	104	101	105	3.0	107	106	106	0.94

LCS b1 and b2 samples are laboratory control spike water samples spiked at 4000 pg/L LCS b3 samples are sediment samples spiked at 400 pg/g RSD = relative standard deviation RPD = relative percent difference

Table 16. Coplanar PCB Labeled Analog Recovery for Water Matrix (%)

Labeled Analog	Field ID Extract ID MS File Matrix	Method Blank b1 41158 L18V12.RPT Method Blank	Method Blank b2 41198 L28V11.RPT Method Blank	MIX 1102 41140 L18V15.RPT Water	WEIR 1102 41141 L18V16.RPT Water	MIX 102998 41142 L18V17.RPT Water	BG 102998 41143 L18V18.RPT Water	WEIR 102998 41144 L18V19.RPT Waler
13C 81-TCB		78.4	98.1	84.3	80.1	79.2	82.9	82.3
13C 77-TCB		82.2	95.6	86.1	86.5	90.3	87.7	89.2
13C 126-PeCB		91,5	102	101	88	76.8	98.1	101
13C 169-HxCB		62.8	113	93.1	66.3	44.4	83.6	80.5

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	EB 112598 41145 L18V110.RPT Water	BG 1116 41146 L18V111.RPT Waler	MIX 1116 41147 L18V114.RPT Waler	WEIR 1116 41148 L18V115.RPT Waler	WEIR 110598 41149 L18V116.RPT Water	WEIR 1112 41150 L18V117.RPT Waler	WEIR 1109 41151 L18V118.RPT Water
13C 81-TCB		82.8	64.5	84.8	88.8	67.4	82.1	77.9
13C 77-TCB		86.5	78.6	89.5	94.9	70.9	83	82.2
13C 126-PeCB		100	64.9	94.4	89.3	69	97.8	91.9
13C 169-HxCB	. <u>.</u>	84	49.3	69.3	69.7	51.9	84.8	68.3

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

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Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	INLET 1102 41182 L28V16.RPT Waler	INLET 102698 41183 L28V17.RPT Waler	BG 1112 41184 L28V18.RPT Waler	MIX 1109 41185 L28V111.RPT Waler	MIX 110598 41187 L28V112.RPT Water	WEIR 1119 41188 L28V113.RPT Water	WEIR 1124 41189 L28V114.RPT Waler
13C 81-TCB		105	96.4	106	96.2	93.1	112	53.4
13C 77-TCB	•	106	99.1	106	94.7	93.9	114	55.7
13C 126-PeCB		115	106	112	102	106	121	56.9
13C 169-HxCB		131	121	137	117	131	136	61.8

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 16 (Continued)

Labeled Analog	Field ID Extract ID MS File Matrix	MIX 1112 41190 L28V115.RPT Water	BG 1119 41191 L28V116.RPT Water	MIX 1119 41192 L28V117.RPT Waler	INLET 101598 41193 L28V118.RPT Waler	LCS b1 41155 L18V13.RPT LCS	LCS b1 41154 L28V14.RPT LCS	LCS b2 41197 L28V12.RPT LCS	LCS b2 41196 L28V13.RPT LCS
13C 81-TCB		109	94.4	110	105	59.6	78.3	87.4	106
13C 77-TCB		112	99.6	111	112	85.4	93.1	86.6	108
13C 126-PeCB		114	102	121	113	46.3	63.8	96.4	113
13C 169-HxCB		120	103	137	122	24.8(J)	39.2	121	126

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

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Labeled Analog	Field ID Extract ID MS File Matrix	Average	Standard Deviation
13C 81-TCB	•	87.8	15.3
13C 77-TCB		92.4	13.2
13C 126-PeCB		95.0	19.2
13C 169-HxCB		91.3	33.8

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 17. Coplanar PCB Labeled Analog Recoveries for Sediment Matrix (%)

Labeled Analog	Field ID Extract ID MS File Matrix	Method Blank b3 41241 A06V11.RPT Method Blank	INLET 1102 41233 A06V16.RPT sediment	INLET 102698 41234 A06V17.RPT sediment	INLET 110598 41235 A06V18.RPT sediment	INLET 101598 41236 A06V19.RPT sediment	LCS2 b3 41240 A06V13.RPT LCS	Average	Standard Deviation
13C 81-TCB		102	107	102	102	38.1	111	93.7	27.5
13C 77-TCB		97.6	106	102	98.3	39.4	107	91.7	25.9
13C 126-PeCB		103	107	109	104	39	105	94.5	27.3
13C 169-HxCB	·	118	125	126	121	46.2	126	110.4	31.6

J—The labeled analog recovery is outside the MRI criteria of 25-150%.

Table 18. Congener Specific PCBs Laboratory Control Spike Results

		a. Congener	Lab ID (a)	LCS1 B1	LCS2 B1	LCS1 B2	LCS2 B2		
	Aqueous LCS	Sediment LCS	Extract ID	41152	41153	41194	41195		
	Spike Level	Spike Level	MS File	L18F12	L18 F 13	A04F03	A04F04	Water	
PCB Congener	Batch 1,2	Batch 3	Matrix	Water	Waler	Waler	Water	Mean	RSD
	ng/L	ng/g	Units				% Recovery	% Recovery	n=4
DiPCB(8)	100	10		77.1	76.2	69.8	62.2	71.3	9.7
TriPCB(18)	100	10		78.5	79.6	72.2	72.2	75.6	5.3
TriPCB(28)	100	10		89.5	91.5	76.9	72.9	82.7	11.1
TriPCB(37)	100	10		86.7	83.2	75.6	71.4	79.2	8.8
TetraPCB(52)	100	10		80.1	79.7	67.5	64.8	73.0	11.0
TetraPCB(49)	100	10		78.3	74.3	62.7	66.4	70.4	10.1
TetraPCB(47)	100	10		77.5	80.6	66.6	66.1	72.7	10.2
TetraPCB(44)	100	10		80.2	77.6	65.2	67.4	72.6	10.2
TetraPCB(42)	100	10 .		75.6	77.0	67.7	63.8	71.0	8.9
TetraPCB(64)	100	10		79.1	83.7	68.8	68.0	74.9	10.3
TetraPCB(74)	100	10		80.1	82.4	73.2	72.2	77.0	6.6
TelraPCB(70)	100	10		87.6	84.4	77.4	69.3	79.7	10.2
TetraPCB(66)	100	10	•	80.5	85.0	63.2	67.2	74.0	14.1
TetraPCB(80)	100	10		84.2	84.2	74.9	73.8	79.3	7.2
TetraPCB(60)	100	10		80.7	81.2	68.2	73.6	75.9	8.2
PenlaPCB(95)	100	- 10		81.7	86.1	66.9	68.5	75.8	12.6
PentaPCB(91)	100	10		82.6	82.0	69.6	68.5	75.7	10.2
PenlaPCB(92)	100	10		81.2	81.8	72.4	72.4	76.9	6.8
PentaPCB(84/101)	200	20		85.3	82.0	69.5	70.3	76.8	10.5
PentaPCB(99)	100	10		84.2	86.6	68.1	71.2	77.5	11.9
PentaPCB(119)	100	10		79.9	83.6	69.9	71.1	76.1	8.7
PentaPCB(97)	100	10		80.7	84.8	71.1	78.7	78.8	7.3
PentaPCB(86)	100	· 10		89.5	81.4	68.8	66.6	76.6	14.1
PentaPCB(87)	100	10		81.2	82.5	65.1	74.5	75.8	10.5
PentaPCB(120)	100	10		84.0	84.5	71.1	69.4	73.3	10.5
PenlaPCB(110)	100	10		81.4	84.4	70.9	67.1	77.9	10.9
PenlaPCB(82)	100	10		82.3	82.3	69.4	74.4	75.9 77.1	8.2
PentaPCB(123)	100	10		87.6	82.6	75.8	68.9	77.1 78.7	
PentaPCB(118)	100	10							10.3
PentaPCB(118)	100	10		85.7	84.9	77.4	76.3	81.1	6.1

Table 18 (Continued)

PCB Congener	Aqueous LCS Spike Level Batch 1,2 ng/L	Sediment LCS Spike Level Batch 3 ng/g	Lab ID (a) Extract ID MS File Matrix Units	LCS1 B1 41152 L18F12 Water % Recovery	LCS2 B1 41153 L18 F 13 Waler % Recovery	LCS1 B2 41194 A04F03 Waler % Recovery	LCS2 B2 41195 A04F04 Water % Recovery	Waler Mean % Recovery	RSD n=4
PentaPCB(114)	100	10		75.6	80.3	71.9	66.4	73.6	8.0
PentaPCB(105/127)	200	20		84.3	82.6	73.4	71.9	78.0	8.1
HexaPCB(151)	100	10		83.8	84.3	65.7	68.0	75.5	13.3
HexaPCB(149)	100	10		84.6	83.7	66.0	69.7	76.0	12.6
HexaPCB(146)	100	10		82.7	81.7	69.9	66.6	75.2	10.9
HexaPCB(153)	100	10		83.7	85.3	70.4	70.3	77.4	10.6
HexaPCB(168)	100	10		84.9	84.0	70.9	69.6	77.3	10.6
HexaPCB(141)	100	10		77.5	82.4	66.9	68.8	73.9	9.9
HexaPCB(137)	100	10		79.9	85.0	72.9	69.2	76.7	9.2
HexaPCB(138)	100	10		89.6	97.5	74.6	76.2	84.5	13.0
HexaPCB(158)	100	10		89.3	87.5	66.8	67.6	77.8	15.7
HexaPCB(166)	100	10		86.6	87.6	71.3	70.3	79.0	11.9
HexaPCB(128/167)	200	20		87.1	88.8	71.9	71.9	79.9	11.6
HexaPCB(156)	100	10		86.5	86.6	70.4	69.6	78.2	12.2
HexaPCB(157)	100	10		80.6	85.2	69.6	69.8	76.3	10.2
HeptaPCB(179)	100	10		79.8	80.8	68.4	68.3	74.3	9.3
HeptaPCB(187)	100	10		82.9	82.5	71.4	74.2	77.7	7.5
HeptaPCB(183)	100	10		89.7	88.9	73.5	63.7	78.9	16.0
HeptaPCB(185)	100	10		81.5	87.7	70.4	65.3	76.2	13.4
HeptaPCB(174)	100	10		83.7	78.1	74.6	66.5	75.7	9.5
HeptaPCB(177)	100	10		87.5	81.0	58.1	69.4	74.0	17.5
HeptaPCB(171)	100	10		85.6	79.8	63.0	68.7	74.3	13.8
HeplaPCB(180)	100	10		86.2	81.7	64.0	74.1	76.5	12.7
HeptaPCB(191)	100	10		84.2	78.3	64.0	66.0	73.1	13.3
HeptaPCB(170/190)	200	20		82.7	82.0	80.4	71.2	79.1	6.8
HeptaPCB(189)	100	10		82.9	81.8	66.7	66.1	74.4	12.4
OctaPCB(200)	100	10		80.7	81.7	61.4	65.6	72.3	14.3
OctaPCB(198)	100	10		82.0	86.6	63.2	60.9	73.2	17.8
OctaPCB(201)	100	10		75.7	80.4	65.0	59.2	70.1	13.8
OctaPCB(196/203)	200	20		86.3	81.0	66.8	64.5	74.6	14.3

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Table 18 (Continued)

PCB Congener	Aqueous LCS Spike Level Balch 1,2 ng/L	Sediment LCS Spike Level Batch 3 ng/g	Lab ID (a) Extract ID MS File Matrix Units	LCS1 B1 41152 L18F12 Water % Recovery	LCS2 B1 41153 L18 F 13 Water % Recovery	LCS1 B2 41194 A04F03 Waler % Recovery	LCS2 B2 41195 A04F04 Waler % Recovery	Water Mean % Recovery	RSD n=4
OctaPCB(195)	100	10		86.8	87.4	75.4	64.6	78.6	13.8
OctaPCB(194)	100	10		85.9	77.9	66.5	59.9	72.6	16.0
OctaPCB(205)	100	10		86.6	85.4	62.5	64.3	74.7	17.5
NonaPCB(208)	100	10		87.4	87.8	68.5	66.9	77.6	14.8
NonaPCB(207)	100	10		84.8	83.6	68.5	68.0	76.3	12.1
NonaPCB(206)	100	10		88.2	88.9	74.2	76.5	81.9	9.4
DecaPCB(209)	100	10		86.1	86.8	65.8	66.1	76.2	15.5

^{*} Lab ID Code- LCS1 designates laboratory control spike 1; LCS2 is spike 2; and B designates Batch number

Table 18 (Continued)

	LCS1 B3	LCS2 B3		
}	41237	41238		
	A05F7	A05F8	Sediment	
	Sediment	Sediment	Mean	RPD
PCB Congener	% Recovery	% Recovery	% Recovery	n=2
DIPCB(8)	52.2	58.1	55.2	10.6
TriPCB(18)	56.5	62.9	59.7	10.7
TriPCB(28)	70.8	76.0	73.4	7.1
TriPCB(37)	76.1	79.8	78.0	4.7
TetraPC8(52)	64.4	71.6	68.0	10.5
TetraPCB(49)	58.6	69.1	63.8	16.5
TetraPCB(47)	63.8	69.1	66.4	8.0
TetraPCB(44)	62.6	66.7	64.7	6.2
TetraPCB(42)	64.7	68.9	66.8	6.4
TetraPCB(64)	70.2	71.2	70.7	1.4
TetraPCB(74)	74.9	77.3	76.1	3.1
TetraPCB(70)	77.2	84.9	81.1	9.5
TetraPCB(66)	67.5	69.2	68.3	2.5
TetraPCB(80)	77.7	80.3	79.0	3.3
TetraPC8(60)	75.3	79.4	77.3	5.4
PentaPCB(95)	67.4	67.9	67.6	0.6
PentaPCB(91)	73.6	72.1	72.9	2.0
PentaPCB(92)	77.0	77.0	77.0	0.0
PentaPCB(84/101)	72.3	74.4	73.4	2.9
PentaPCB(99)	77.4	74.0	75.7	4.5
PentaPCB(119)	75.0	74.0	74.5	1.4
PentaPCB(97)	72.5	76.5	74.5	5.4
PentaPCB(86)	78.5	108.5	93.5	32.1
PentaPCB(87)	75.1	69.4	72.2	7.9
PentaPCB(120)	74.9	45.1	60.0	49.6
PentaPCB(110)	73.0	72.8	72.9	0.3
PentaPCB(82)	76.5	78.1	77.3	2.1
PentaPCB(123)	80.2	78.1	79.1	2.6
PentaPCB(118)	82.0	87.9	85.0	6.9

Table 18 (Continued)

	LCS1 B3 41237	LCS2 B3 41238		
	A05F7	A05F8	Sediment	
	Sediment	Sediment	Mean	RPD
PCB Congener	% Recovery	% Recovery	% Recovery	n=2
PentaPCB(114)	75.9	72.2	74.0	5.0
PentaPCB(105/127)	79.8	81.6	80.7	2.2
HexaPCB(151)	70.9	72.2	71.6	1.7
HexaPCB(149)	75.7	70.6	73.2	7.0
HexaPCB(146)	71.5	70.4	71.0	1.6
HexaPCB(153)	78.1	75.8	76.9	3.0
HexaPCB(168)	77.6	71.8	74.7	7.7
HexaPCB(141)	73.3	71.5	72.4	2.5
HexaPCB(137)	78.6	73.9	76.2	6.1
HexaPCB(138)	80.6	77.1	78.8	4.4
HexaPCB(158)	72.6	72.7	72.6	0.1
HexaPCB(166)	74.9	75.4	75.1	0.6
HexaPCB(128/167)	75.5	79.2	77.4	4.8
HexaPCB(156)	76.3	77.1	76.7	1.0
HexaPCB(157)	76.6	73.3	74.9	4.4
HeptaPCB(179)	75.1	78.1	76.6	3.9
HeptaPCB(187)	80.5	73.8	77.1	8.7
HeptaPCB(183)	72.9	81.2	77.0	10.8
HeplaPCB(185)	78.1	77.2	77.7	1.1
HeptaPCB(174)	77.9	78.6	78.2	0.9
HeptaPCB(177)	68.0	68.1	68.1	0.1
HeptaPCB(171)	76.8	79.0	77.9	2.8
HeptaPCB(180)	78.3	67.5	72.9	14.9
HeptaPCB(191)	75.6	72.0	73.8	4.9
HeptaPCB(170/190)	82.6	70.5	76.5	15.8
HeptaPCB(189)	69.6	71.4	70.5	2.5
OctaPCB(200)	69.8	68.4	69.1	2.1
OctaPCB(198)	67.7	67.7	67.7	0.0
OctaPCB(201)	68.8	70.2	69.5	2.0
OctaPCB(196/203)	69.2	73.2	71.2	5.6

Table 18 (Continued)

PCB Congener	LCS1 B3 41237 A05F7 Sediment % Recovery	LCS2 B3 41238 A05F8 Sediment % Recovery	Sediment Mean % Recovery	RPD n=2
OctaPCB(195)	76.8	72.6	74.7	5.7
OctaPCB(194)	71.4	71.4	71.4	0.0
OctaPCB(205)	70.7	75.1	72.9	6.0
NonaPCB(208)	73.3	70.7	72.0	3.6
NonaPCB(207)	70.7	71.3	71.0	0.8
NonaPCB(208)	78.1	81.4	79.7	4.2
DecaPCB(209)	72.5	65.5	69.0	10.1

Lab ID Code- LCS1 designates laboratory control spike 1; LCS2 is spike 2; and B designates Batch number

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Table 19. Congener Specific PCBs Surrogate Recoveries for Water Matrix (%)

PCB Surrogate	Date File Sample	12/18/98 L18F09 Spike Check	1/4/99 A04F01 Spike Check	12/18/98 L18F11 MB	12/18/98 L18F12 LCS	12/18/98 L18F13 LCS	12/18/98 L18F14 41140	12/21/98 L21F01 41141	12/21/98 L21F02 41142	12/21/98 L21F03 41143	12/21/98 L21F04 41144	12/21/98 L21F05 41145
13C 6 Mono		88.1	87.9	65.6	74.3	72.8	68.3	60	63.2	73.9	63.9	69.6
13C12 Tri		89.6	90.3	81.3	84	85.6	81.5	77.2	79.2	85.8	76.7	82.3
13C12 Tetra		96.1	92.4	82.7	86	90.6	90.9	82.9	86.5	83.7	85	85.2
13C12 Hexa		87.4	81	86.5	91.1	93.2	93.1	86.7	96.6	93	89.1	93.9
13C12 Octa		84.2	76.4	80.9	84.4	82	84.8	80.3	87.7	87.4	85.9	86.7
13C12 Deca		88.1	71.4	79.1	84.3	83.6	86.7	80.9	88.4	85.5	83.6	84

Table 19 (Continued)

PCB Surrogate	12/21/98 L21F06 41146	12/21/98 L21F07 41147	12/21/98 L21F08 41148	12/21/98 L21F09 41149	12/21/98 L21F10 41150	12/21/98 L21F11 41151	1/4/99 A04F02 MB	1/4/99 A04F03 LCS	1/4/99 A04F04 -41195	1/4/99 A04F05 41182	1/4/99 A04F06 41183	1/4/99 A04F07 41184	1/4/99 A04F08 41185
13C 6 Mono	83.5	65.1	61.8	56.3	53.5	63.2	60.1	60.9	55	65.1	66.5	67	73.6
13C12 Tri	85.1	84.3	77.8	64.7	70.8	76.7	74.1	68.1	65.5	79.7	73.1	77.4	81.1
13C12 Tetra	91.8	84.1	83.1	70.2	74.4	84	78.5	70.1	71.7	82.6	76.2	76.8	83.7
13C12 Hexa	99.2	90.7	77.6	69.9	78.4	85.6	77	71.1	73.7	82.8	72.4	76.1	80.5
13C12 Octa	91.9	86.9	75	64.9	73.7	80.3	69.8	64.1	64.2 ·	74.1	67.8	69	71.5
13C12 Deca	88.5	83.9	71.3	64.2	73.2	78.7	69.8	62.7	62.3	71.8	65.2	66.3	70.4

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Table 19 (Continued)

	1/4/99 A04F09	1/4/99 A04F10	1/4/99 A04F11	1/4/99 A05F03	1/4/99 A05F04	1/4/99 A05F05	1/4/99 A05F06	, , , , , , , , , , , , , , , , , , , 	Sldev
PCB Surrogate	41187	41188	41189	41190	41191	41192	41193	Mean	· n=29
13C 6 Mono	69.7	64	67.4	52.7	58.8	67.1	71.8	65.3	6.9
13C12 Tri	80.4	75.2	79.1	71.6	67.8	76.4	78.4	77.3	5.9
13C12 Tetra	81.2	82	82.8	75.3	69.6	79.4	80.2	81.1	6.0
13C12 Hexa	80.6	77.2	79.2	74	68.9	72.5	75.7	82.3	8.9
13C12 Octa	71.1	69.7	71.1	63.5	58.1	62.6	64.2	75.0	9.5
13C12 Deca	68.6	68.2	68	57.3	53.1	57.7	58.2	72.9	10.6

Table 20. Congener Specific PCB Recoveries for Sediment Matrix (%)

									·		
PCB Surrogate	Date File Sample	1/5/99 A05F01 Spike Check	1/5/99 A05F02 MB	1/5/99 A05F07 LCS	1/5/99 A05F08 LCS	1/5/99 A05F09 41233	1/5/99 A05F10 41234	1/5/99 A05F11 41235	1/5/99 A05F12 41236	Mean	Sldev n=7
13C 6 Mono	-	93	46.2	44.5	47.3	74.3	66.4	68.4	56.2	57.6	12.1
13C12 Tri		91.1	76.8	64.3	71.8	103.1	95.1	99.4	80.2	84.4	14.9
13C12 Tetra		93.7	84.6	71.2	75.7	96.9	104.1	111.1	82.7	89.5	14.9
13C12 Hexa		84.1	84.4	80.1	79.8	75	74.3	81.7	66.7	77.4	5.9
13C12 Octa		72.8	73.5	70.2	69.3	54.3	53.2	55.4	46.3	60.3	10.5
13C12 Deca		65.4	66.2	64.5	62.8	35.5	33.9	36.3	30.3	47.1	16.4

Appendix A

Sample Receipt Records



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SAMPLE RECEIPT CHECKLIST

MRI Project No. 5356-0/

Samples Received by: M. Re Cheany Date: 10/23/9p
Airbill No. 808 941 771 411 Chain-of-Custody No
Airbill present? Yes No Chain-of-Custody present? Yes No
Shipping container intact? (Yes) No Container type Soull Red Cooler
Custody seals present? Yes No Seal Location: N/A
C-O-C properly filled out? Yes No Does C-O-C indicate sample type? Yes No
Ice packs or ice frozen? Yes No Samples cold? Yes No Temperature °C: 5.5°
Sample containers intact? (ves) No Labels permanently affixed? (ves) No
Sample containers leaking? Yes No Container type indicated? Yes No
Are all samples properly labeled and accounted for? Yes No
Are samples stored as indicated by the project leader? Yes No
Is the C-O-C filled out completely, signed, and dated? Yes No M/A
If pH check upon receipt is required, indicate where it is recordedN//
Sample storage location:
COMMENTS
USACE: Pednick +oun 10/15/98 @ 0915
ID: INLET 10/15/98 - 10/23/91 M. Chean
<u>, </u>

MRI-QAVMRI-5003.DOC



Customer Name: Versar

Project ID: 0918-158 5356

Order ID:

981000019

Order Date:

10/23/98-

Page:

l of l

Order Comment:	Received from MRI dock by M.Cheramy.

AIRI Sample ID	Customer Sample 1D	Motels	Quantity	Pate Collected	Date Received	Test	Test Group	Method	Due Date
98003391	ID: INLET USACE: Pedricktown	Liquid	16	10/15/98 12:00 AM	10/23/98 2:43 PM	test_smv			
			SA	MPLE COND	ITION RECOR	D	<u> </u>		
				Are sample	s submitted with a chain	of custody? Now	10/23	128	
	:		Are the nor		ne as stated on the chala		; :	hearry	
	•			Are bo	ttle caps tight and secur	ely in piace? Yes 🖊	P7. 6	hebisty	
				Were	all containers intact who	n received? Ves ^{t./}	_	/	
				Wer	e samples submitted in s	m lee chest? Ves 💆			
					Were samples re-	celved cold? Yest/			
			Wer	e samples within the ho	lding time for the reque	sted test(s)? Yest 🖯	•		
			Is the volu	ne of sample submitted	sufficient for the reque	sted test(s)? Yes 🔧			
			Ares	ull samples for volatile	organic analyses free of	hendspace? N/A	•		

AB 12/7/48 et ter both Water & Redement _

Code: MRI-5003 Revision: 1 Effective: 3/27/98

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SAMPLE RECEIPT CHECKLIST 11/4/38 MRI Project No. 53596

Sample's Received by: Mike Cheramy Date: 116.463
Airbill No. 808 941 771 466 Chain-of-Custody No. 555/
Airbill present? (es) No Chain-of-Custody present? (Yes) No
Shipping container intact? (es) No Container type Cooler
Custody seals present? Yes No Seal Location: No Seal Location:
C-O-C properly filled out? Yes No Does C-O-C indicate sample type? Yes No
lce packs or ice frozen? (Ves) No Samples cold? (Yes) No Temperature °C: 2°
Sample containers intact? Yes No Labels permanently affixed? Yes No
Sample containers leaking? Yes No Container type indicated? Yes No
Are all samples properly labeled and accounted for? Yes No
Are samples stored as indicated by the project leader? (es) No
Is the C-O-C filled out completely, signed, and dated? Yes No
If pH check upon receipt is required, indicate where it is recorded.
Sample storage location: _375 - E
COMMENTS
7 liquid Sames for High-Resolution PCB Amalysis.
5 Ambers 2 Clear glass Jurs. Client COC not
Syled. 11/04/98 M. Cheramy
•

MRI-QAMRI-5003_DOC

Samp Master LIMS Sample Login Report

Customer Name: Versar

Project ID: 5356 - 0/

Order Comment: Received from MRI dock by M. Cheramy,

Order ID:

Order Date:

Page:

1011

MRI Sample ID	Customer Sample II)	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
98003502	NIX1102 V	Liquid	ı	41/2/98 12:00 AM	11/4/98 2:30 PM	lest_sniv			*****
	USACE: Pedricktown					_			
98003503	INLET I 102 V	Liquid	1	41/2 98 12:00 AM	11/4/98 2:30 PM	test_smv			
	USACE: Pedricktown			,		-			
98003504	WEIR1102	Liquid	1	41/2/98 12:00 AM	11/4/98 2:30 PM	test_smv			
	USACE: Pedricktown					· -			
98003505	INLET102698	Liquid	1	40 26 98 12:00 AM	11/4/98 2:30 PM	test_smv			
	USACE: Pedricktown					- · · - ·			
98003506	NIX102998 V	Liquid	ı	JO 29-98 12:00 AM	11/4/98 2:30 PM	test_smv			
	USACE: Pedricktown	-		,		•			
8003507	BG102998	Liquid	1	40,29,98 12:00 AM	11/4/98 2:30 PM	test_smv			
	USACE: Pedricktown	•	-	,		4634_1414			•
8003508	WEIR 102998	Liquid	1	40 29 98 12:00 AM	11/4/98 2:30 PA4	lest_smv			
	USACE: Pedricktown	-	,		The state of the s	1631			

SAMPLE CONDITION RECORD

Are samples submitted with a chain of custody? Yes wit 5551

Are the number of samples the same as stated on the chain of custody? Yes 110419 by M-Chenny

Are bottle caps tight and securely in place? Yes

Were all containers intact when received? Yes

Were samples submitted in an ice chest? Yes

Were samples received cold? Yes

Were samples within the holding time for the requested test(s)? Yes

Is the volume of sample submitted sufficient for the requested test(s)? Yes

Are all samples for volatile organic analyses free of headspace? N/A

Versar

CHAIN OF CUSTODY RECORD

PROJECT NO.	•	ECT NAM						7	7			י א נז אי	MET			INDUSTRIAL	١,
4119-007	PAC	<u>:05-</u>	Pec	dric	Ktown			/5	_	,	,	, , , , , , , , , , , , , , , , , , ,	VIVIE 1	snə —	, ,	HYGIENE SAMP	LE
SAMPLERS: (Signaru	re)				(Printed)		_/	S. T. T. Mens	37	/ /				/ /			
	,						/å		¥						/ /	REMARKS	
FIELD Sample Number	DATE	TIME	COMP.	GRAB	STATION LOCATION												
MIXHOZ		1100		V	Pedric Ktown NT	1	1										
INIET 1102 "	, ,	1100		1		1	١										
WEIR 1102 "		930	<u>V</u>			1)								B017	he Cap Ch. Yead.	
TX12-T1026616)	1330		V		I	١									, <u> </u>	
MX102998,		120C		4		1	1										
189105668 A	/	945		V		1	١										
102484 102416		OEU	V			,	1								·—		
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Relinquished by: (Sign	ature)		Date	/ Tim	e Received by: (Signature)	Reli	nguis	hed by	r: (Sig	nature		T	Date	———I 8 / Tio 1	me f	Received by: (Signature)	
(Printed)				l	(Printed)	(Prin	ted)							Щ.	(1	Printed)	
Relinquished by: (Sign	ture)		Date	/ Tim	Received for Laboratory by: (Signature) Mice Channy / MRI	11/04	_	/ Time	'	lemark	ıs N	. ک	·51a		far.	· Reliquishment.	
(Printed)					(Printed) OMPI												•
Directorietas Aristas Dive					Mike Checamy	11/0	717	5		وَرِنيو	. (4)	84-10-1 84-10-0		المنافقة	, -		

Cooe: MRI-5003 Revision: 1

Effective: 3/27/98 Page: 8 of 17

SAMPLE RECEIPT CHECKLIST

MRI Project No. 5356-0/ Date: 12/01/98 Samples Received by Mike Cherumy Airbill No. 802 924 236 Chain-of-Custody No. 94403 Yes∠No Chain-of-Custody present? Airbill present? Shipping container intact? (e) No Container type Colema Seals intact? (Yes) No Seal Location: 11d 120 1400 Custody seals present? (Yes) No C-O-C properly filled out? Yes No Does C-O-C indicate sample type? Yes No Yes No Samples cold? Yes No Ice packs or ice frozen? Temperature °C: 5-5" Sample containers intact? Yes No Labels permanently affixed? Sample containers leaking? Yes (No) Container type indicated? Are all samples properly labeled and accounted for? No Are samples stored as indicated by the project leader? (Yes` No Is the C-O-C filled out completely, signed, and dated? Yes If pH check upon receipt is required, indicate where it is recorded. Sample storage location: 370 = Coldroom **COMMENTS** 11 1-liturglass Jus of light samples. M. Chermi

MRI-QAMRI-5003.DOC

ENVIRONMENTAL SERVICES CHAIN-OF-CUSTODY RECORD Project Contact: Jessica Farrar **Turn Around Requirements:** Project Name: Paricknum Project No.: 100-007 OF SAMPLES Signature: Sampler (print): EIC ADDITIONAL REQUIREMENTS NUMBER O Protocol Grab Sample I.D. No. Date Time CWA SW846 EB112578 <u>11/25/92</u> X MIXIII9 11/19/98 11/16/12 B&1116 16/98 16/72 WEIR 110578 11/05/12 MEIR 1184 WEIRITT 11/12/18 WETRIIIZ WEIRHOR 11/9/38 BG1112 11/15/98 11/12/98 11/09/98 INLET 110598 11/05/98 MIX 110598 11/05/78 rempBlace Received by: Mike Cheany (Signature) MKI Relinquished by: (Signature) Date Time Time Received by: Date (Signature) (Signature) 11/30/28 Received for Laboratory by: MLT
(Signature) m.K. Chen my Relinquished by: (Signature) Anmarks: 11 Simply received intact. Date Time Date Time 12/198 10:27 White -- Lab Yellow -- Office "I fomogenize all composite samples prior to analysis

Customer Name: Versar

Project ID: 5356

Order ID:

981200003

Order Date:

12/1/98 🗸

Page:

1 of 2

Order Comment:	Received from MRI dock at 9:55 by M. Cheramy.	m.ch	erm
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MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date-Received	Test	Test Group	Method	Due Date
98003625	EB112578 EB112578	Water	ਖ	Y1/25/98 12:00 AM	Y2/1/98 2:21 PM	test_smv /			12/29/98 2:21:3
98003626	BG1116 BG1116	Water	t	Y1/16/98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003627	MIX1116 MIX1116	Water	ı	11 16 98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003628	WEIRIII6 WEIRIII6	Water	1	-11 16 98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003629	WEIR110598 WEIR110598	Water	1	11 5 98 12:00 AM	12/1/98 2:21 ቦል፤	test_smv	•		12/29/98 2:21:3
98003630	WEIR1112 WEIR1112	Water	1	11 12 98 12:00 AM	12/1/98 2:21 PAT	test_smv			12/29/98 2:21:3
98003631	WEIR1109 WEIR1109	Water	1	11 9 98 12:00 AM	12/1/98 2:21 PAI	test_sinv			12/29/98 2:21:3
98003632	BG1112 BG1112	Water	ı	/11/12/98 12:00 AM	12/1/98 2:21 PA1	test_smv			12/29/98 2:21:3
98003633	MIX1109 MIX1109	Water	1	11 9 98 12:00 AM	12/1/98 2:21 PM	test_smv			12/29/98 2:21:3
98003634	INLETT 10595 INLETT 10598	Water	1	1 5 98 12:00 AM	12/1/98 2:21 የአና	test_smv			12/29/98 2:21:3
98003635	NIIX110598 NIIX110598	Water	1	5 98 12:00 AM	12/1/98 2:21 PM	lest_smv			12/29/98 2:21:3

Sample Master LIMS Sample Login Report

Customer Name: Versar

Project ID: 5356

Order Comment: Received from MRI dock at 9:55 by M. Cheramy,

Order ID:

981200003

Order Date:

12/1/98

Page:

2 of 2

RI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Due Date
			Si	AMPLE CON	DITION RECOI	RD			
				Are sam	ples submitted with a chai	n of custody? Yes	/ 12lo	1198	by M. Chenny
			Are the nu		same as stated on the chal			•	
				Are	hottle caps tight and secu	rely in place? Yes	/		
				We	re all containers intact wi	ben received? Yes	/		
				"	ere samples submitted in	an Ice chest? Yes	/		
					Were samples r	ecolved cold? Yes	/		
			We	re samples within the	holding time for the requ	ested test(s)? Yes !			
			Is the volu	tme of sample submit	ted sufficient for the requ	ested test(s)? Yesv			
			Are	all samples for volati	lle organic anniyses free o	f headspace? NA			

APPENDIX

Revision: 1
Effective: 3/27/98

Page: 8 of 17

SAMPLE RECEIPT CHECKLIST

5356-01 MRI Project No. Date: (2/1/98 (10:41) Samples Received by: Mike Cheamy 2423 Airbill No. 8029 Chain-of-Custody No. 74404 Airbill present? (Yes) No Chain-of-Custody present? Container type Jaco Costa Shipping container intact? (es) No Seals intact? (Yes) No Seal Location: 1'd interface Custody seals present? (Yes) No Does C-O-C indicate sample type? C-O-C properly filled out? (Yes) No (es) No Samples cold? (Yes Temperature °C: 2.5" Ice packs or ice frozen? Sample containers intact? (Yes) No Labels permanently affixed? No Sample containers leaking? Yes (No) Container type indicated? Are all samples properly labeled and accounted for? No Are samples stored as indicated by the project leader? No Is the C-O-C filled out completely, signed, and dated? Yes, If pH check upon receipt is required, indicate where it is recorded. Sample storage location: _330 - E Coldro, m COMMENTS Present but not listed on COC isTed but lined-0-Ton COC #94403.

MRJ-QAVMRI-5003.DOC

ENVIRONMENTAL SERVICES
CHAIN-OF-CUSTODY RECORD

CHAIN-OF-COS	_																								Page	_\ oi _{-	
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Turn Around Requirements		<u>~ </u>	_ 1 - 0	, , , ,	-			1																			
Project No.: Project N	ame:							┨	.		7																
4119-001 7	od	M	ckh	nn				ES		(X)		- 1															
Sampler (print):	-		Signal	ure:				M M		X	1	- 1	Ì			1	1		Ì	j.	1						
EC				216				NUMBER OF SAMPLES		+ Posi						į									ADDI	ITIONAL UIREMENTS	3
Sample 1.D. No.	Сомр	Grab	Date	,	Time	CWA	SW846	NUMBE	당	1																J. 12.11.2.11.0	
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	X	_	11/25																								
MIX 1112	4_	X		178		<u> </u>	<u> </u>	4	_	1					_				<u> </u>								
DG 1117	1	X	11/19	98		_	<u> </u>	Lj.			-	_ _	_	_	ļ	<u> </u>			 		ļ <u>.</u> .	<u> </u>					
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RelinqVished by: (Signature)			Date	Time	Received (Signature	for Labor	atory by: Cher	ing 1	/	•	Date	0	Time	Re 	mark >Te	s: \$	ر مر مر	化九八	MI:3	X C0	111 C,	9 1:5-	pr Teal he s	ese va	~T, 60 Coc94	t not buy	<u>一</u>
'i lomogenize all composite samples pr	lor to an	alysis			, ,		זיע	Te - Le	b Y	ellow -	Office	Pink -	- Field										_=-	7		· · · · · · · · · · · · · · · · · · ·	

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APPENDIX

Sam Master LIMS Sample Login Report

Customer Name: Versar

Project ID: 5356

Order Comment: Received from MRI dock at 9:55 AM by M. Cheramy.

Order ID:

981200004

Order Date:

12/1/98

Page:

lof!

MRI Sample ID	Customer Sample ID	Matrix	Quantity	Date Collected	Date Received	Test	Test Group	Method	Don to a
98003636	WEIR1119 Pedricktown	Water V	47	√1/19/98 12:00 AM	12/1/98 3:18 PM	test_sunv	· · · ·		Due Date 12/29/98 3:18:1
98003637	WEIR1124 Fedricktown	Water	1	41/24/98 12:00 AM	12/1/98 3:18 PM	test_smv			12/29/98 3:18:1
98003638	MIX1112 Pedricktown	Water	1	41/12/98 12:00 AM	12/1/98 3:18 PM	lėsi_smv			12/29/98 3:18:1
98003639	BG1119 Pedricktown	Water	j	11/19/98 12:00 AM	12/1/98 3:18 PM	lesl_smv			12/29/98 3:18:1
98003640	MIX1119 Pedricktown	Water	ı	11/19:98 12:00 AM	12/1/98 3:18 PM	test_sum.			12/29/98 3:18:1

SAMPLE CONDITION RECORD

Are samples submitted with a claim of custody? Yes

Are the number of samples the same as stated on the chain of custody? No MIKILIA Precent by Thot

Are hottle caps tight and securely in place? Yes listed on field COC. lined-OFT

Were all containers intact when received? Yes on Coc'tt 94403.

Were samples submitted in an ice chest? Ves

Were samples received cold? Yes

1260,198 by M. Cheany

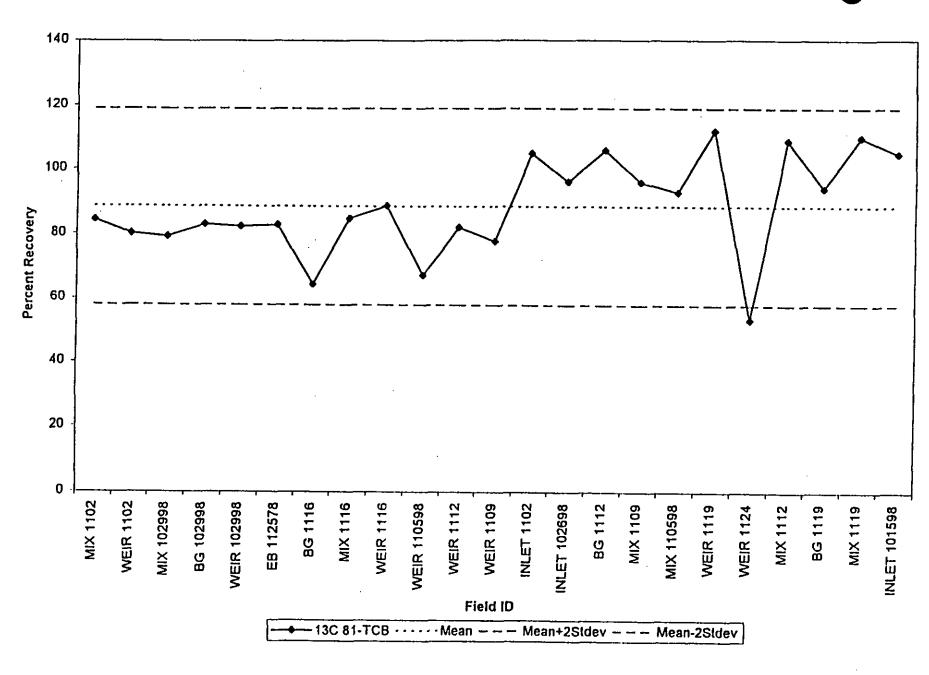
Were samples within the holding time for the requested test(s)? Yes

Is the volume of sample submitted sufficient for the requested test(s)? Yes

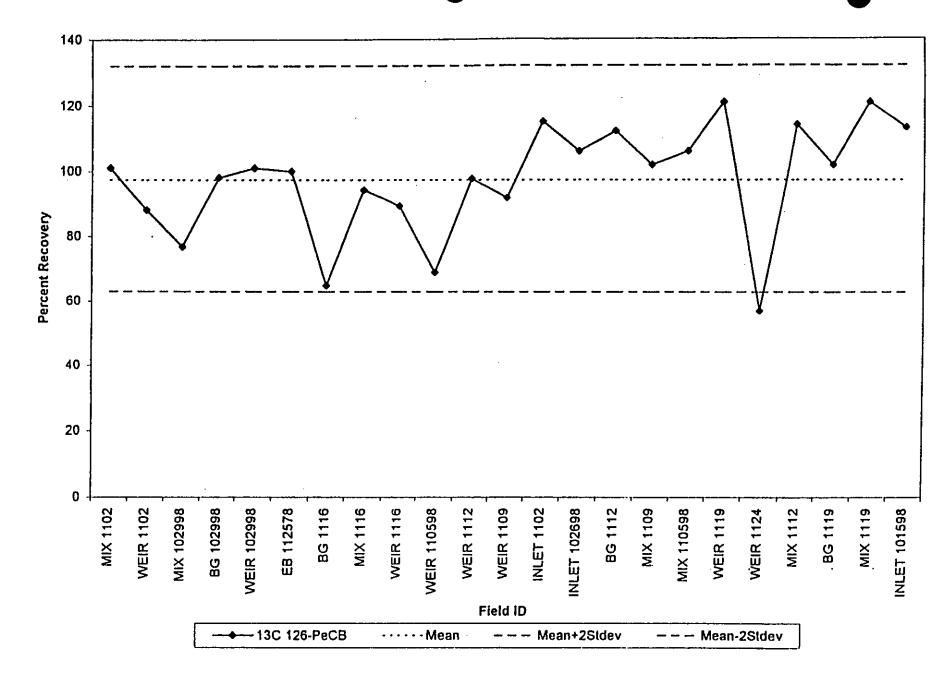
Are all samples for volatile organic analyses free of headspace? NA

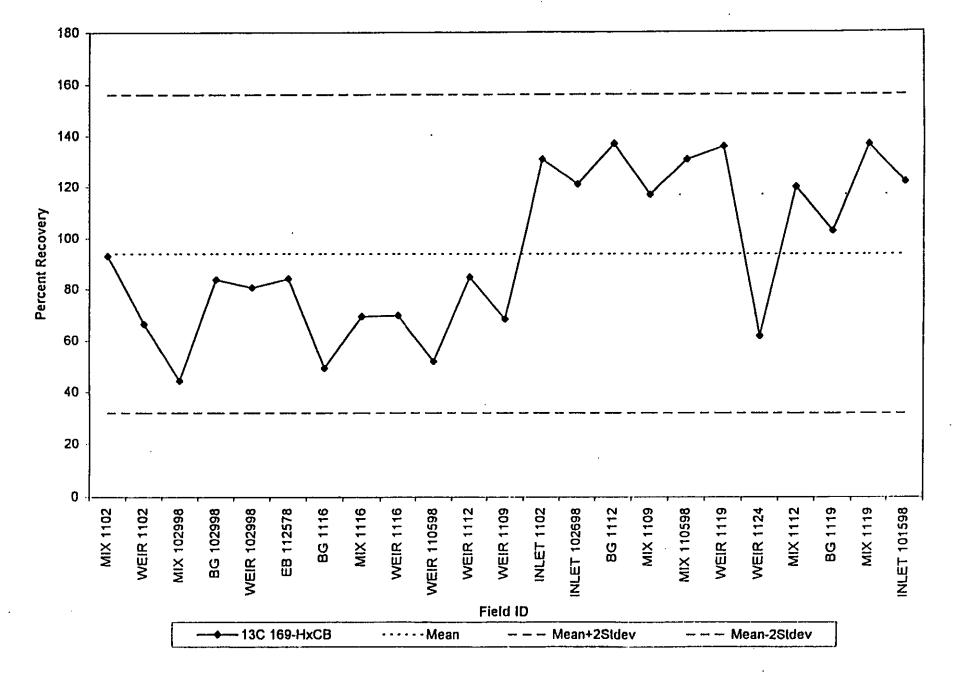
Appendix B

Performance Charts for 13 C₁₂ Coplanar PCB Internal Quantitation Standards



APPENDIX





APPENDIX

1.

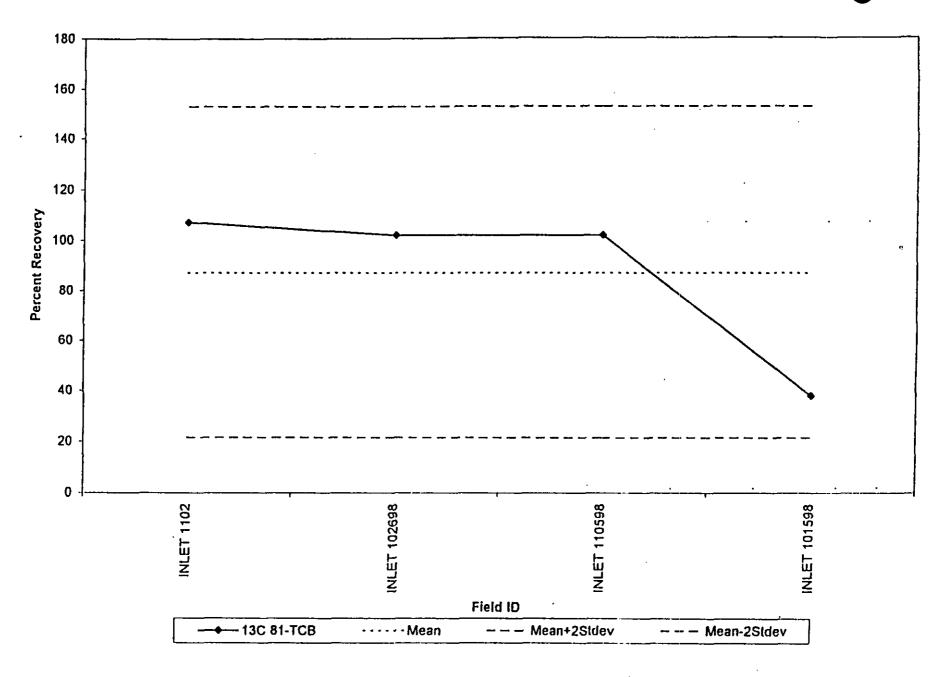
INORGANIC QA/QC



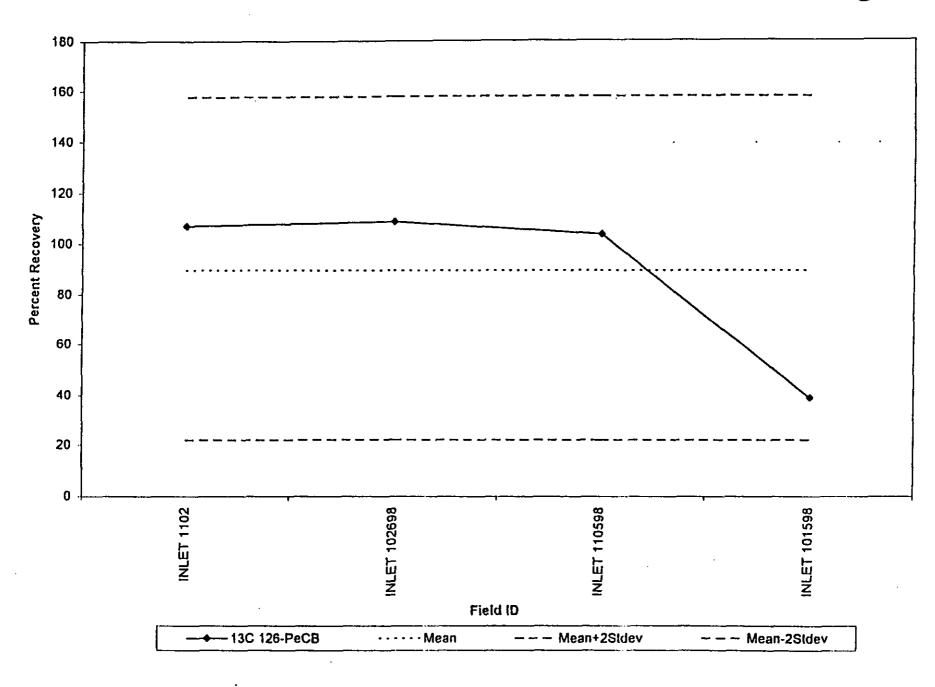


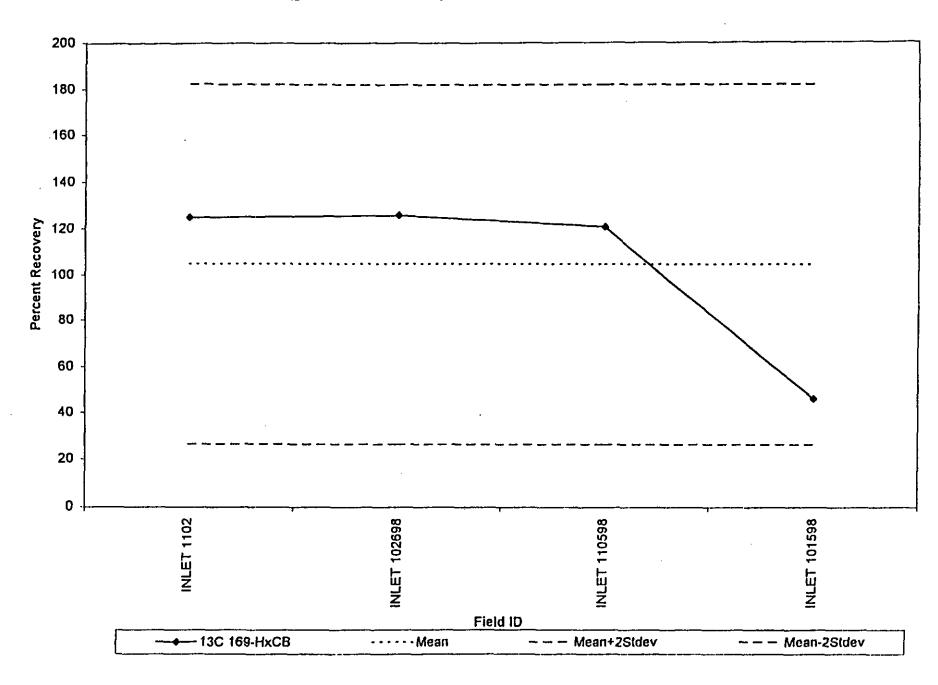
APPENDIX D

Pedricktown North Confined Disposal Facility
Total Maximum Daily Load Data



APPENDIX



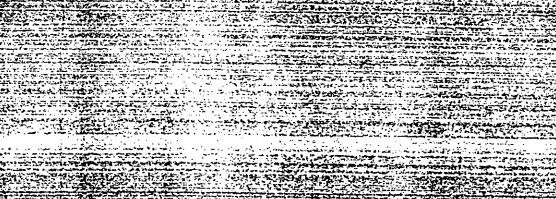


APPENDIX

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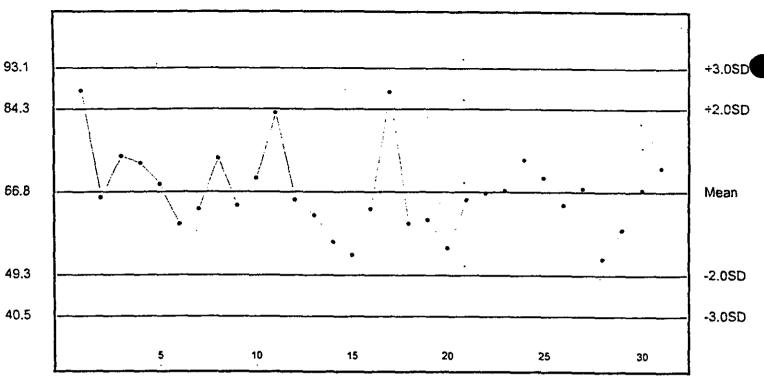
Appendix C

Performance Charts for ¹³C₁₂,PCB Surrogate Recoveries



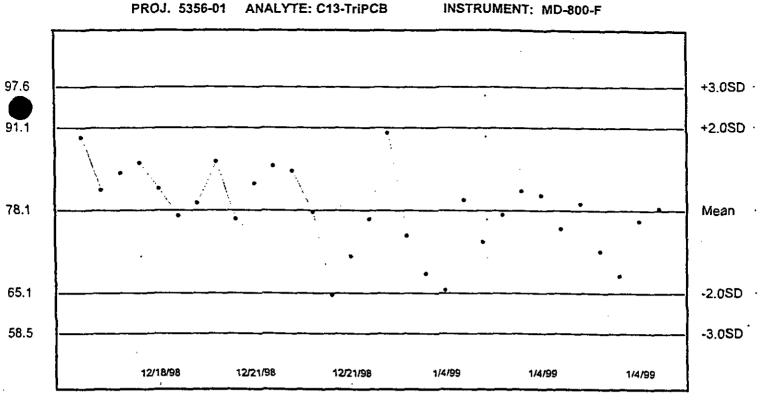
SUKRUGATE RECUVERT SUMMARY. VERSAR [PCB] WATER

PROJ. 5356-01 ANALYTE: C13-MonoPCB INSTRUMENT: MD-800-F



n= 31 Mean= 66.8 SD= 8.8 CV= 13.11% Min= 52.7 Max= 88.1

: C:\CCPRO\VERSAR99.CCP umn C13-MONO-PCB



n= 31 Mean= 78.1 SD= 6.5 CV= 8.35% Min= 64.7 Max= 90.3

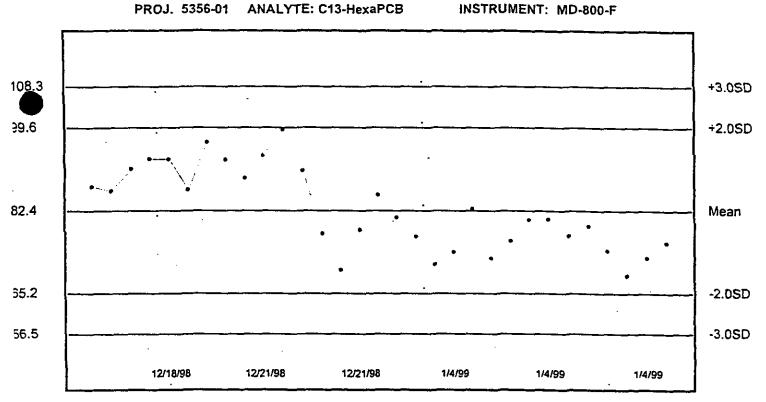
: C:\CCPRO\VERSAR99.CCP umn C13-TRI-PCB

PROJ. 5356-01 ANALYTE: C13-TetraPCB INSTRUMENT: MD-800-F 102.1 +3.050 95.4 +2.0SD 81.9 Mean 68.5 -2.0SD 61.8 -3.0SD 12/18/98 12/21/98 12/21/98 1/4/99 1/4/99 1/4/99

TOWNS TO VENSAR [FUD] WATER

n= 31 Mean= 81.9 SD= 6.7 CV= 8.21% Min= 69.6 Max= 96.1

e: C:\CCPRO\VERSAR99.CCP

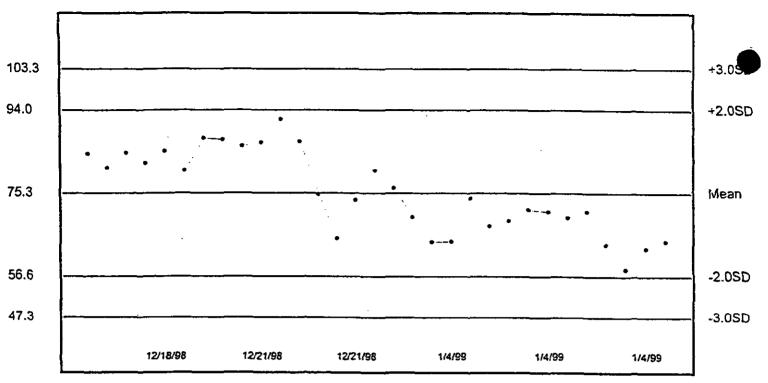


n= 31 Mean= 82.4 SD= 8.6 CV= 10.46% Min= 68.9 Max= 99.2

: C:\CCPRO\VERSAR99.CCP umn C13-HEXA-PCB SURROGATE RECOVERY SUMMARY. VERSAR [PCB] WATER

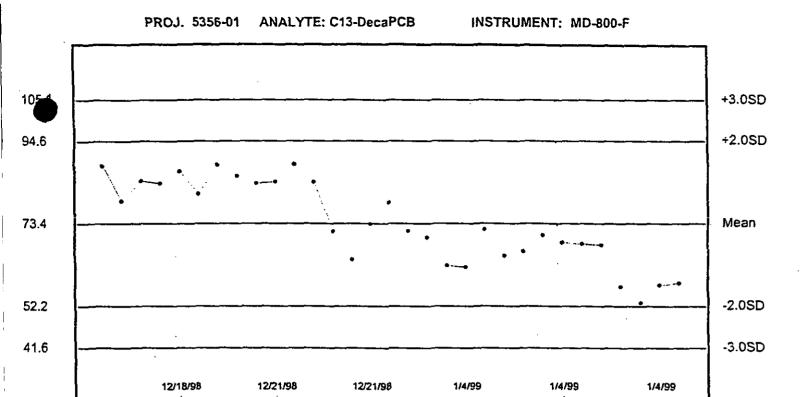
PROJ. 5356-01 ANALYTE: C13-OctaPCB

INSTRUMENT: MD-800-F



n= 31 Mean= 75.3 SD= 9.3 CV= 12.41% Min= 58.1 Max= 91.9

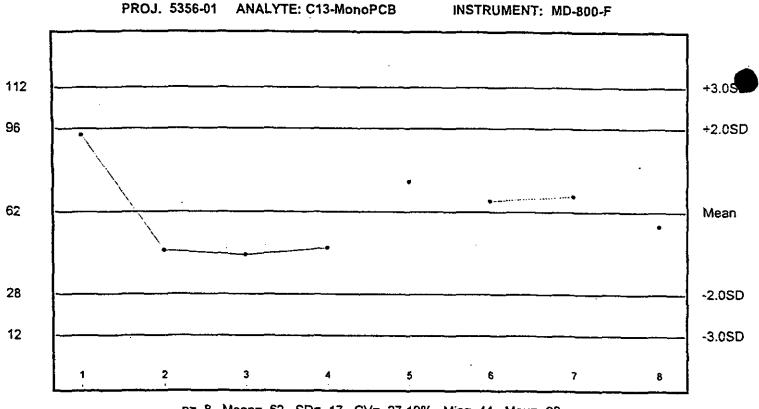
le: C:\CCPRO\VERSAR99.CCP
plumn C13-OCTA-PCB



n= 31 Mean= 73.4 SD= 10.6 CV= 14.42% Min= 53.1 Max= 88.5

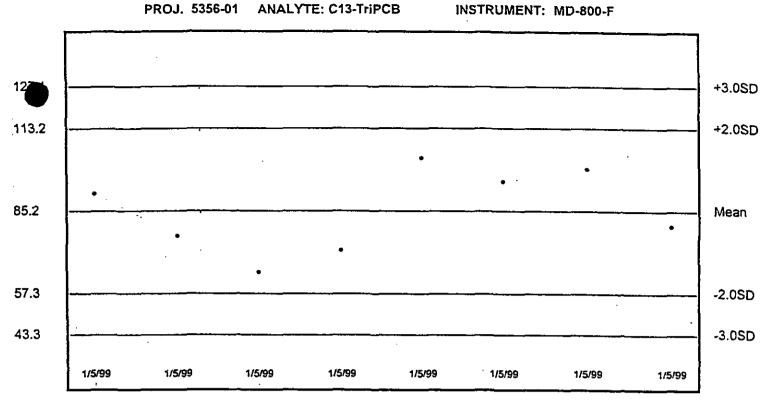
:: C:\CCPRO\VERSAR99.CCP

CONTROGATE RECOVERT SUMMARY. VERSAR [PCB] SEDIMENT



n= 8 Mean= 62 SD= 17 CV= 27.10% Min= 44 Max= 93

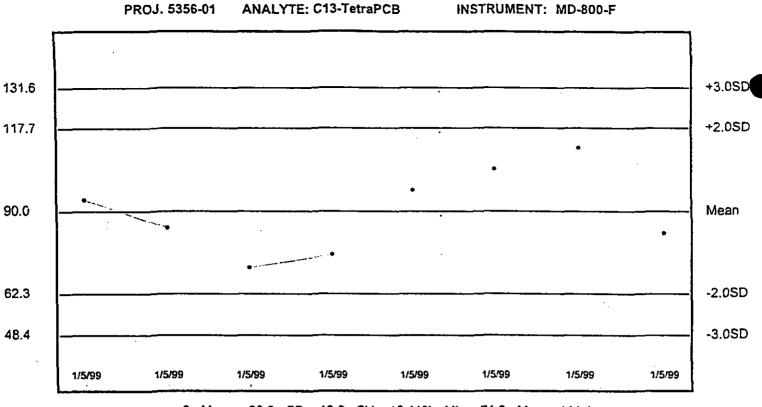
e: C:\CCPRO\VERSED99.CCP



n= 8 Mean= 85.2 SD= 14.0 CV= 16.40% Min= 64.3 Max= 103.1

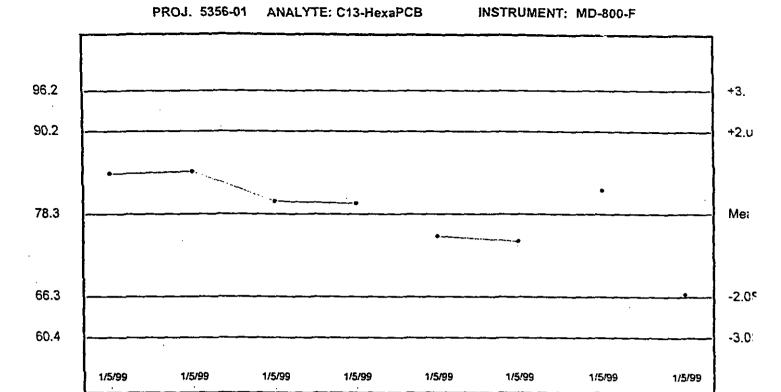
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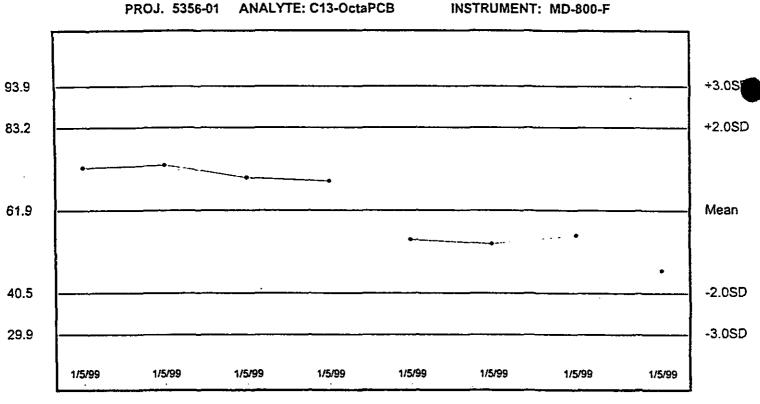
n= 8 Mean= 90.0 SD= 13.9 CV= 15.41% Min= 71.2 Max= 111.1

e: C:\CCPRO\VERSED99.CCP olumn C13-TETRA-PCB



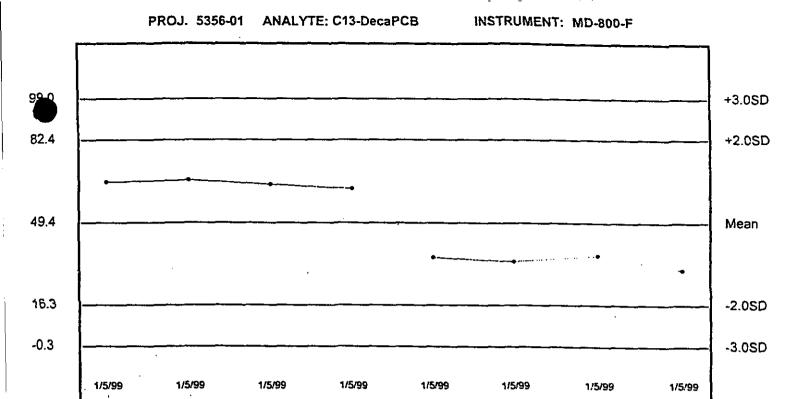
n= 8 Mean= 78.3 SD= 6.0 CV= 7.63% Min= 66.7 Max= 84.4

:: C:\CCPRO\VERSED99.CCP lumn C13-HEXA-PCB CONTROLL REGULATION CONTROL TENORY [CONTROL TENORY]



n= 8 Mean= 61.9 SD= 10.7 CV= 17.24% Min= 46.3 Max= 73.5

ile: C:\CCPRO\VERSED99.CCP olumn C13-OCTA-PCB



n= 8 Mean= 49.4 SD= 16.5 CV= 33.51% Min= 30.3 Max= 66.2

e: C:\CCPRO\VERSED99.CCP plumn C13-DECA-PCB



APPENDIX D

Pedricktown North Confined Disposal Facility
Total Maximum Daily Load Data